

Flavour. The *Dutch* at *Batavia* have found a way of distilling a spirituous Liquor from it with Arrack, which they call anise Arrack, and esteem as a great Cordial and Carminative; it somewhat resembles our Aniseed Water in Taste, but is weaker.

CHAPTER II.

ANACARDIUM,
The Anacardium.

THE *Anacardium* is a small dry'd Fruit, of a broad and flattened Figure, resembling in some Degree the Heart of some small Animal, whence it has its Name; it is of about an Inch in Length, near three Quarters of an Inch in Breadth in its upper Part, and thence grows gradually narrower, till it terminates in a Point at the Apex. It is of a dusky blackish or deep grey Colour, and of a smooth and glossy Surface, and is affix'd by a Pedicle, the Rudiments of which remain more or less long usually with it, and the Thickness of which is so considerable, that it takes up nearly the whole Breadth of the Base it is affix'd to. It is composed of a double Rind not very thick, but sufficiently firm and tough, and of a white fleshy *Nucleus* which fills it wholly up. The *Nucleus* itself is of an agreeable Taste, much like that of an Almond or Chestnut; but between the two Barks there is a Sort of fungous Substance in the Cells, of which there is contain'd an acrid and caustic fluid Matter, which dries by Degrees in keeping, but still retains its caustic Quality; this is of a blackish Colour, and very readily manifests itself to the Taste, on applying the Tongue to a broken Part of the Fruit.

The antient *Greeks* were not at all acquainted with the *Anacardium*, and in much later Ages we have had not a little Confusion from the mistaking an Occidental Fruit, the *Acajou*, which some have called the Occidental *Anacardium*, for the same with this. *Anacardiums* are to be chosen heavy, sound, and of a dark Colour, and such as have a fine white Pulp, and a large Quantity of the oily Matter in the Cells between the two Rinds.

The Tree which produces the *Anacardiums* is one of the *Decandria Monogynia* of *Linnaeus*, and of the *Arbores pruniferae* of Mr. Ray. It is described by Father *Camelli* under the Name of *Anacardium legitimum sive medium*, for he describes two other Kinds; a Tree which produces the Cashew, another the *Ligas*, and this other the true *Anacardium*. It is a large and tall Tree, some of them having been seen seventy Feet high, and measuring sixteen Feet round. It grows by Waters and is much branch'd; its Leaves are of an oblong or somewhat oval Figure, and four or five Feet in Length. Its Flowers are small and whitish; they grow in Clusters and are of a sweet Smell. The Fruit is oblong, as big as a Hen's Egg, and has no Stone or Kernel in it; they are esculent and are at first yellowish, and afterwards Purple. The *Anacardium* which serves in the Place of a Kernel hangs out of the Fruit, and grows at the End quite naked. This Tree grows in *Malabar*, and the *Philippine* Islands. The *Indians* eat the young Shoots of it boil'd, they also eat the Fruit and the Kernels of the *Anacardium*. They roast these in the Fire, after which the Rind easily separates, and the Pulp is as well tasted as any thing of the Nut Kind. Many have supposed
this

this whole Fruit poisonous and caustic, but Experience shews that it is only the Liquid between its two Shells or Rinds that is so. The *Indians* use this Liquor as a Caustic to eat down proud Flesh in Wounds; and they put it into the Hollow of an aching Tooth to destroy it. They mix it with Quicklime for marking their Silks and other Wares, the Stain it gives being almost indelible. They have also a way of making a very good Ink of the unripe Fruit bruised together with the *Anacardiums* as they hang to it. The *Arabians* have said great things in Praise of the *Anacardium*; they tell us it strengthens and comforts the Brain, restores the injured Nerves to their true State, and even assists the Memory. For these Purposes the *Confectio Anacardina*, a Compound in which this Fruit was a principal Ingredient, was invented, and we are told wonderful things of its Effects: But *Hoffman* and many others condemn the internal Use of this, or of any thing in which this Fruit has a Place, and tell us of People who have been made mad by it, and of others who after an apparent Advantage from it for a time, have dy'd miserably of its after Effects. The Efficacy of the *Anacardium* consists wholly in the Liquor between its Skins, the rest is indifferent. It is of some Use externally to take off Specks and Blemishes of the Skin, but it is so sharp that the Part to which it has been apply'd, must be wash'd soon after with Water, otherwise it will eat too far. As to its medicinal Qualities, given internally, we have now no Opportunity of judging of them, since it is wholly out of Use in the Shops, and scarce to be any where met with.

CHAPTER III.

ACAJOUS,
The Cashew Nut.

THE *Cashew*, *Acajous* or *Cajous*, is a Fruit in many things approaching to the Nature of the *Anacardium*. It is a dry and hard Fruit, or Kernel of a Shape resembling that of a Kidney, oblong, somewhat gibbous on one Side, and depressed or sunk in on the other, and rounded at the two Ends. It is about an Inch in Length, and somewhat more than half an Inch in Diameter. Its Surface is smooth and glossy, its Texture considerably firm; it is moderately heavy, and when cut or broken, is found to be composed of a thick Skin or Rind, composed of two Membranes, and of a spongy Matter lodged between them, the Cells of which contain a reddish oily Liquid or soft Matter, of so acrid and caustic a Nature, that if it be suffer'd but to touch the Skin any where, it immediately burns it like Fire; and if tasted but in the smallest Quantity, puts the Tongue and Lips to the severest Torture for many Hours after. The *Nucleus* contain'd within this double Rind is of the same Kidney like Shape with the whole; it is white, and of the Consistence, Appearance and Taste of a Sweet Almond; but it is cover'd with a yellowish thin Skin, which should be separated before it is used. The *Acajou* is to be chosen fresh, sound and plump, full of Kernel, and not without a due Quantity of the thick Fluid between the Skins.

The Tree which produces it is one of the *Decandria Monogynia* of *Linnaeus*, and one of the *Arbores pruniferae* of Mr. Ray. *Pijo* has described it under the Name of *Arbor Acajou*, vulgo *Cajou*, and *Marcgrave* under that of *Acajaiba*.

Others call it, *Anacardii alia species*, in the *Hortus Malabaricus* it is named *Kapamana*, and by *Ray*, *Pomifera seu potius prunifera Indica nuce reniformi summo apici innascente Cajous dicta*. It grows in the *American Islands*, and in the *East-Indies*, and in different Places thrives so differently as in some to grow sixty or more Feet high, and in others not thirty. It is very much branch'd and very full of Leaves. Its Bark is greyish and full of Cracks. Its Leaves are four or five Inches long, and about three broad, rounded at the Ends, thin and of a fine green both on the upper and under Side. The Flowers are small, and grow in a Sort of Umbells on the tops of the Branches. The Fruit is as big as a Goose's Egg, soft and fleshy, and of a yellowish or purplish Colour, or else of a Mixture of both; the Flesh of this is of a sweet but somewhat austere Taste, and at its End hangs the *Cajou* naked and of a grey Colour. The Tree when wounded, or often of itself, sends forth a reddish Gum, which melts freely in Water like Gum Arabick, and answers very well all its Purposes for sticking things together. The *Indians* bruise and press the fleshy Fruits and obtain from them a Liquor which, after Fermentation, becomes vinous and inebriating; it is diuretic to a great Degree, and on Distillation it affords a Spirit of a good Flavour. It makes Vinegar also when sour, which is equal to any made from Wine. The Kernels of the *Acajou* Nut are also much esteemed by the *Indians*; they eat them not only for the Sake of their agreeable Flavour, and the good Nourishment they afford, but because they esteemed them Provocative to Venery. The acrid Oil contain'd between the two Rinds stains Linen in such a manner, that it is scarce possible to be washed out again. The *Indians* extract this Liquor from the Fruits and keep it for staining, and for anointing Timber to prevent it from Decay. They also use it externally to take off all Kinds of Blemishes of the Skin; it acts as a Caustic on these Occasions, and must be suffer'd to remain but a little time on, for fear of its eating in too deep; but it is found, with all the Caution in the World, sometimes to bring on erisypelatous Inflammations over the whole Face, on only applying it to two or three Spots of it on this Occasion.

CHAPTER IV.

BALANUS MYREPSICA,
The Ben Nut.

THE Ben Nut is a Fruit of an uncertain and irregular Figure, sometimes almost round, sometimes oblong, always more or less raised into Ridges in three Places, each running the whole Length, and in the whole giving it something like a triangular Form. It is about half an Inch in Length, often less, and usually from a quarter of an Inch to a third or more in Thickness. It has a Shell of a pale greyish or whitish Colour of a woody Texture, but thin and therefore brittle; within this is the Kernel, which is fat and oily, of a bitterish Taste, and is cover'd with a very white and thick fungous Pellicle.

The Ben Nut is to be chosen fresh, full of Kernel, and such as has not too hard a Shell. The Ben Nut was very well known among the Antients, the very oldest of the *Greek* Writers whose Works have come down to us mention it familiarly. *Theophrastus* and *Dioscorides* call it *Balanus Myrepsica*, and

others.

others of the same Nation, *Myrobalanus* and *Balanus Ægyptiaca*. *Pliny* calls it the *Myrobalanus* and *Glans Egypti*, and the *Arabians*, Ben, the Name we still preserve for it.

The Tree which produces it is common on the Mountains of *Arabia*. Its Leaves are of a very singular Kind, they consist of long, tender, and small Pedicles, ending in Points and furnish'd on each Side with yet smaller Branches or Shoots from them, and these yet with others from them; all these Ramifications, which together make what some call the ramose Leaf of the Ben Tree, stand in Pairs; and on them grow also in Pairs, small ones of different Shape in the several Parts of the Ramification, those toward its Bottom being roundish, and the others narrower and more oblong as they approach the Top. These small Leaves fall early in the Autumn, and the Ramifications which supported them, standing after them, seem so many young Branches; but they afterwards fall off too, which is the Occasion of their being called Leaves also, and of the Leaves of the Ben being said to be of two Kinds, ramose and foliaceous. It would be more just to say that the Leaves of the Ben stand on ramose Pedicles, which do not fall with them, but sometime afterward. The Fruit of this remarkable Tree is a Pod of three or four Inches long, and not very thick; it has two Cells, in each of which it contains one of the Ben Nuts, and it terminates in a sharp Beak or prominent Point; this Pod is of a reddish Colour within, but on the outside it is greyish, or else of a pale brown, much striated, the *Striæ* all running longitudinally, of a membranaceous Substance, flexile and tough, and of an astringent Taste.

Ben Nuts examined by a chemical Analysis, afford a moderate Quantity of an insipid inodorous Phlegm, which however contains some Portion of an alkaline Salt, because it turns a Solution of corrosive Sublimate turbid; after all the Liquor that will thus rise by the Cucurbit is separated, if the Remainder be put into a Retort, and distilled in a Sand Heat, there will rise a red empyreumatic Liquor of a saline and acid Taste, in the Proportion of about an Ounce from each Pound. This Liquor gives manifest Proofs of its containing both an acid and an alkaline Salt, for it coagulates and precipitates a Solution of corrosive Sublimate; it effervesces with Spirit of Salt, and it turns Syrup of Violets red; after this there arises a thick Oil like Butter, which is so copious as to weigh near half the Quantity of the Nut; and finally the remaining Matter calcined will afford no alkaline fixed Salt, but a very small Quantity of a Salt rather of the neutral Kind.

Ben Nuts pounded in a Marble Mortar, and strongly pressed for their Oil, yield it in Form of a fine limpid yellowish Fluid, looking much like the finest Oil of Olives; it has no Smell and scarce any Taste; the Quantity of this is nearly a fifth Part of the Weight of the Nuts. This Oil distilled by the Retort yields first a thin and limpid, after this a thicker and almost congealed Oil, making together about two Thirds of its Quantity; the latter is of a reddish Colour, and of a pungent Smell, and acrimonious Taste, and turns Syrup of Violets red; after this there comes over a fluid Oil of a brown Colour in so considerable a Quantity from the Remainder, as to leave scarce any thing behind; this is of a pungent Smell also, and of a bitterish and acrid Taste; and on mixing with Syrup of Violets, turns it more red than the other. The
Remainder

Remainder in the Retort is very inconsiderable, and is an Earth insipid, and of a variegated Colour. The remaining Mass of Ben Nuts, from which the Oil has been expressed, distilled in the common Way, yields a Liquor of a penetrating Smell like that of Garlick, and of a hot and pungent Taste like that of Pepper; and after this an acrid and subacid Phlegm evidently loaded with Salt both of the acid and urinous Kind; and after all this on increasing the Fire yet farther, a yellowish urinous Spirit, and a volatile Salt which concretes into long Needles, thin and pellucid; and finally a thick and empyreumatic Oil.

It appears from all this that the Ben Nut contains, beside its thick Oil, a thin, acrid, and pungent one, though in small Quantity, and with it an ammoniacal Salt; and it is probably to the last of these Principles that it owes its Power of exciting to vomit. The *Greeks* and the *Arabians* were very fond of the Ben Nut for its Virtues; they have left us very wonderful Things recorded of it, as to its opening Obstructions of the *Viscera*. It acts both as a Vomit and a Purge, but in its latter Capacity it operates but very slowly, and with great Pain and Uneasiness to the Patient, and often brings on cold Sweats. It has therefore grown out of Use in Medicine at present, but the Perfumers are very fond of its Oil. This has the Advantage of being wholly destitute of Smell in itself, and of keeping ever so long without growing rancid; it is therefore the fittest Oil in the World for them to use in the making their Essences or Oils of the sweet Flowers by Insolation. It readily receives their fine Scents, and retains them a long Time; but it is seldom to be had genuine with us.

There is beside the Ben Nut here described, which is the true officinal Kind, and that known to the *Greeks* and *Arabians*, another Species in the *East Indies*, the Fruit of the Tree called in the *Hortus Malabarius*, *Mouringen* and *Moringa*, and by *Breynius* in his *Prodromus Balanus Myrepfica, siliqua triangulari Semine minore alato*. It grows to twenty or thirty Feet high, and three or four Feet in Thickness; it is covered with a greyish or blackish Bark, of an acrid Smell like that of the *Nasturtium* or Horse Radish. Its Leaves are very long, of the pinnated Kind, and their *Costæ* or Ribs are ramose, somewhat in the Manner of the other Ben Tree, but much less so. The Flowers are small and stand in Clusters, and are succeeded by very long Pods of a trigonal Form, and composed of three Valves, containing within, a large Quantity of a white fungous Matter, and a Number of trigonal Seeds alated, and having a white Kernel under a cartilaginous Cover or Rind. It grows wild in *Malabar*, *Ceylon*, and other Parts of the *East Indies*, in a sandy Soil. The *Indians* are very fond of this Tree for its Virtues; they prepare Pills of its Bark, Fruit, and Root for the Cramp; they mix the Juice with Pepper for Disorders of the Eyes, and attempt to cure Vertigoes by blowing it into them. With Ginger they account it a Remedy for Fevers, and boiled in Water with Rice they use it externally by Way of Cataplasin to Tumors of many Kinds, and for Pains in the Limbs. They also make an Ointment of the Leaves with Butter, which they use to the same Purposes, as also to the cleansing of foul Ulcers.

CHAPTER V.

PISTACHIA,
The Pistachia Nut.

THE *Pistachia* is a dry Fruit of an oblong Figure, pointed at both Ends, and of about half an Inch in Length, and a third of an Inch in Thickness. It is of an irregularly angular Figure, elevated in some Places and depressed in others, and marked with one very regular and prominent Rib or longitudinal Ridge. The *Pistachia* has a double Shell or Covering; the exterior one is membranaceous, thin, wrinkled and dry; and is at first of a greenish, and afterwards of a reddish Colour. This is tender and brittle, but within or underneath this it has another, a hard, tough, and woody one, which is smooth and of a whitish Colour; within this is enclosed the Kernel, which is of the same oblong and pointed Figure with the whole Fruit, of a green Colour, of a soft and unctuous Substance, and is covered with a thin reddish Pellicle. This Substance is much like the Pulp of an Almond, of a pleasant Taste, sweet and luscious, but not without some faint Bitterness also with it, and is remarkably unctuous and oily.

Pistachias are to be chosen new, well ripened, with full large Kernels, and such as have not the least Turn to be rancid.

Pistachias were known to all the old Writers, *Dioscorides* and *Theophrastus* frequently mention them; the *Arabians* also call them *Pestuch* and *Festuch*, and we sometimes *Fistic* Nuts. We have them from many Parts of the World; they are Natives of *Syria*, *Persia*, *Arabia*, and the *East Indies*; but they are cultivated very successfully for the Sake of their Fruit in *Italy* and *France*.

There are indeed two Kinds of the *Persian* or *Indian Pistachia*, a larger and a smaller; the larger alone is sent to *Europe*; the smaller are less common in the *East Indies* than in *Persia*, where they are however much more esteemed than the large ones, as being better flavoured.

The Tree which produces the *Pistachias* we meet with, is one of the *Diæcia Pentandria* of *Linnaeus*, and of the *Arbores Flore à Fructu remoto* of Mr. Ray. It is described by all the botanical Writers under the Name of the *Terebinthus Indica Theophrasti*, and *Pistachia* or *Pistachia Fructu ramoso*. It is a branched Tree, covered with a greyish Bark, and full of Leaves of the pinnated Kind; the little Leaves that compose each general Leaf are not placed exactly over against one another; they are sometimes roundish, sometimes of a more oblong Figure, and pointed; in general they much resemble the Leaves of the Turpentine Tree, but that they are larger. It produces some male Flowers, and others entirely female, and these not on the same Plant, but on distinct Individuals of the same Species; they are small, and the female ones are succeeded by the Fruits we see. The Leaves of the male *Pistachia* are generally narrower than those of the female. When the male and female Trees stand near one another, Nature, by the Assistance of the Winds, does the Business of the Impregnation. When they are at greater Distances, the People who cultivate them are obliged to gather the male Flowers and shake them over the female Trees when in full Flower, in order to their being impregnated, otherwise few or no Fruits will ripen.

Pistachias

Pistachias abound with a sweet and well tasted Oil, which they will yield in great Abundance on being pressed after bruising them; they are wholesome and nutritive, and are very proper to be prescribed by Way of Restoratives, eaten in moderate Quantity, to People emaciated with long Illnesses. They are recommended as peculiarly good to prevent Obstructions of the Liver, and are found of Service in nephritic Complaints. If there be any Way of taking them better than that of eating them crude, it is the taking an Emulsion of them made with Barley Water and Almonds: They have the Credit of being great Provocatives to Venery, and as such are made Ingredients in many of the Compositions of that Intention, as the *Eleſtuarium Diaſatyron* and the like; but these, as well as the *Pistachias* themselves, are now much out of Use in Medicine.

C H A P T E R VI.

NUCLEI PINI,
Pine Kernels.

THE *Nuclei Pini*, or Kernels of the Cones of the Pine, are a small dry Fruit, half an Inch or more in Length, sometimes near an Inch, consisting of a hard and woody Shell or Covering of an oblong Figure and obtuse at both Ends, of a brownish Colour, and so firm a Texture as to be very difficultly broken; within which is contained an oblong, cylindric, white, and pulpy Kernel, much like that of the Sweet Almond covered with a thin and tender Membrane, of a reddish Colour. The Kernel is of a sweet and very agreeable Taste, and is very oily. The whole *Nucleus*, with its external hard Shell on it, is contained in its natural State in the Cells of the Cones of the Pine Tree, between the hard *Squammæ* or Scales they are externally composed of.

Pine Kernels are to be chosen sound and firm, with full *Nuclei*; and those white, oleaginous, and pleasant to the Taste; such as are yellowish or rancid are to be entirely rejected. The Tree which produces them is one of the *Monœcia Polyandria Monadelphica* of *Linnaeus*, and of the *Arbores coniferæ* of Mr. Ray. It is the common Pine Tree described by all the botanical Writers under the Name of *Pinus Sativa*, and *Pinus Officulis duris foliis oblongis*. It rises to a considerable Height, and spreads very beautifully at the Head; its Back is reddish and full of Cracks and Flaws, its Wood yellowish and very resinous. The Leaves are narrow and oblong, they come two out of every Case, and remain green all the Winter. The Flowers are of the stameneous Kind, and are steril, the Fruit growing on other Parts of the Tree, not where they are, they only supplying the fecundating *Farina*. The Fruit is four or five Inches long, of a turbinated Form, and composed of a Number of woody *Squammæ*, under each of which lie two of the *Nuclei* we have described at the Beginning of this Chapter.

The Ancients were very well acquainted with the Pine Kernels; *Dioscorides* and *Galen* call them *Pityides*, *Strobili* and *Cocculi*; they had them from the Islands of the *Archipelago*. At present they are brought to us in sufficient Abundance from *Italy* and the South of *France*, where the Trees that produce them grow in
great

great Abundance. They abound with a thin and limpid Oil, which is easily extracted from them by Expression, and much resembles that of Almonds, except that it is thinner and lighter. The Kernels are not only used in Medicine, but in Places where they are to be had fresh and in Plenty, are eaten at Table, and make an Ingredient in several good Dishes. They are very proper for People inclined to be consumptive, as they are balsamic and restorative; they are also good against Heats of Urine and nephritic Complaints; they are either to be eaten or made into an Emulsion with Almonds and Barley Water, or with *Pistachias* instead of Almonds.

CHAPTER VII.

J U J U B A,
The Jujube.

THE *Jujuba* or *Zizypha* of the Shops is a Fruit of the pulpy Kind, a little dry'd in the Sun, and in that State pack'd up for Exportation, as Raisins and the like are. It is of an oblong Figure, and somewhat resembles a large Olive in Shape and Size: Its usual Length is about an Inch, and its Thickness somewhat more than half an Inch. It is wrinkled on the Surface very deeply and irregularly, and when cut or broken is found to consist of a thick Pellicle, of a dusky yellowish red Colour, under which there lies a whitish and soft pulpy fungous Matter, enclosing a Stone of a rough Surface and of an oblong Figure, pointed at both Ends. The Jujube has but little Smell, but it is of a pleasant, sweetish and resinous Taste. Jujubes are to be chosen new, large, plump and full of Pulp, not too much wrinkled on the Surface, and such as are of a sweet and pleasant Taste.

The *Arabians*, and the later *Greek* Writers, have been evidently very well acquainted with the Jujube, the former under the Name of *Hanab Hunen* and *Zufaizef*, and the latter under those of *Zizypha*, *Zinzipha* and *Zitnipha*. It should appear also from the Sense of the *Arabians*, as to the antient *Greeks*, that they knew the same Fruit under the Name of *Serika*, for *Avicenna* has transcribed all that *Galen* says of the *Serika* into his Chapter of the Jujube. This however is not Authority enough to ground such an Opinion upon. *C. Baubine*, and some of the other botanical Writers of Credit, have supposed the *Lotus* of *Athenæus* and of *Theophrastus* to be our Jujube, but this is uncertain. The oldest Accounts that can be depended upon are those of *Columella* and of *Pliny*, to both whom our Jujube was evidently known under the Name of the *Zizyphus*; and of which they made two Species, one of a reddish Colour, which probably is the Kind we now have, and the other white. The Antients have left us so little however on these Heads, that it is not easy to come to any Determination about them. Beside the two Species already mentioned, *Lippi* tells us of three others which he found in *Ægypt*; but as we know only one Species in the Shops, that is all we are to be in Care about in a Work of this Kind. The officinal Jujube is brought to us from *Marseilles*: It is cultivated in the Gardens of that Part of *France* for Sale, but the small Quantity of it used now makes it scarce worth while to gather them.

The Tree which produces them is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Arbores pruniferae* of *Mr. Ray*. It is described by *John Baubine* and others under the Name of *Zizypha Sativa*. It grows to the Height of twelve or fourteen Feet, and is much branched and arm'd with very strong and sharp Thorns. The Leaves stand alternately on the Branches, and are of an oblong Figure, an Inch or an Inch and a half in Length, and half as much in Breadth; they are of a lively green, and are serrated at the Edges. The Flowers are small, and grow three or four together in the *Axæ* of the Leaves. The Fruit while growing is composed of a Pulp like that of a Plumb, of a pleasant and somewhat acid Taste, and is cover'd with a thin Rind. The Stone or *Nucleus* is very hard and divided into two Cells, each of which contains a flattish, rounded and soft Kernel, of the Size of that of a Plumb, and of a bitter and somewhat acrid Taste. The Fruit is eaten while fresh, and is very pleasant. Jujubes, distill'd in a Retort, yield a moderate Quantity of an austere and subacid Phlegm: After this a larger Quantity of a more acid and less austere Phlegm; and after this a much smaller Portion of a reddish Liquor, much more acid than the last; and finally a yet smaller Portion of a reddish brown thick Liquor, of an empyreumatic Smell, giving Proofs of its containing no inconsiderable Quantity of an urinous Salt, as well as of an acid one; as do also the several others, only in a more remiss Degree. They all precipitate a Solution of corrosive Sublimate, and all turn Syrup of Violets red, the latter Liquors more than the first: Finally when the Fire is encreased there is obtained a small Quantity of a butyraceous Oil, not so much as a Dram from the Pound of Jujubes, and not the least Grain of concreted Salt appears in the Vessels; finally about a Dram of fix'd Salt, like that of *Tartar*, may be obtained from every Pound of the Fruit by Lixivation.

If the old *Greeks* meant our Jujube by their *Serica*, they give it but an indifferent Character as a Medicine. *Galen* tells us it was bad for the Stomach, difficult of Digestion, and apt to engender Crudities. The *Arabians* on the other hand join with the later *Greeks*, in attributing very great Virtues to it. They say it greatly obtunds the Acrimony of the Humors, and that it is good in Coughs and all Disorders of the Breast, in which the Humors need to be inspissated and soften'd. We have been used to make them a general Ingredient in pectoral Decoctions, but the Custom is of late much gone off, and they are now scarce at all heard of in Prescription, or to be met with in our Shops.

C H A P T E R VIII.

SEBESTEN,

The Sebesten, or Myxa.

THE Sebesten of the Shops, call'd also by some *Myxa*, *Myxaria*, and *Motbeica*, is a dry Fruit much resembling a small dry Plumb. They are much of the Nature of the Jujube, being a Fruit originally soft and pulpy, and only so far dry'd before they are brought to us as is necessary to their keeping good.

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The Sebesten is about three quarters of an Inch long, often less, seldom more, of a blackish Colour, and of a Kind of turbinated Figure, largest at the Base, and terminating in a Kind of Point at the Apex. Its Surface is deeply and irregularly wrinkled, and when perfect it is fix'd in a small hollow Cup, but it so easily slips out of this that we do not always see it. The Fruit when broken is found to consist of a thin and tender membranaceous Skin like that of a Plum, and under that of a soft and pulpy Matter of a brown Colour, tough and viscid, and of a very sweet Taste; within this is a Stone or Kernel to which the pulpy Matter adheres very firmly; this is sometimes ridged in three Places with high Ribs, sometimes flat and smooth in the manner of our common Plum Stones; it usually contains two *Neuclei* or Kernels in two separate Cells; these are of an oblong Figure and flattish, white, and of a pleasant Taste while fresh, but very disagreeable when Stale; though the Generality of the Sebestens have two of these Kernels, and as many Cells in the Stones for them, yet we often meet with them with only one large Cell, and one larger and flat Kernel.

Sebestens are to be chosen large, plump, new and soft, of a good Taste, and such as have their Cup or *Calyx* still adhering to them; such as are bitter or rotten are wholly to be rejected.

The Sebesten was wholly unknown to *Dioscorides*, *Galen*, and *Theophrastus*. There are some who imagine *Athenæus* meant it by the Fruit he calls *Damamyxis*, but there is no Certainty of this. The latter *Greeks* however were very well acquainted with it. *Paulus Aegineta* makes frequent mention of it under the Name of *Myxa*, and *Aetius* and *Aetuarus* under that of *Myxaria*. The *Arabians* call'd it *Mokaita*, *Mukefta* and *Motheica*, and also *Sebesten*. We have our Sebestens from *Ægypt*, *Syria*, and other Parts of the *East*. The Tree which produces them is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Arbores pruniferae* of Mr. Ray. It is described by the *Baubines* under the Names of *Sebesten Domestica* and *Sebesten sive Myxa*, and in the *Hortus Malabaricus* by that of *Vidimaram*. Ray calls it *Prunus Malabaricus fructu racemoso Calyce excepto*. It grows as high as our Plum Trees: Its Bark is thick, rough and whitish: Its Trunk is thick, and the Branches are full of Leaves and bend downward; the Leaves stand alternately, and are short and roundish: The Flowers are small, they stand in Clusters and are white and sweet scented, they stand in a monophyllous hollow Cup, which afterwards remains and encloses the Bottom of the Fruit. The pulpy Part of the Sebesten is, while fresh, so extremely tough and viscous, that the best Bird-lime in the World is that which is made of it, by only beating it with common Water. Sebestens, distill'd in a *Balneum mariæ*, affords a fourth Part of their Weight of an insipid, pellucid Phlegm, which however manifests something of the Acid, on Experiment, turning the Syrup of Violets red; and after this a small Quantity, about half an Ounce from the Pound, of a Liquor of a plainly acid Taste: After this the Mass taken out of the Cucurbit and put into a Retort, will yield about three Ounces and a half from the Pound, of a Liquor limpid and colourless at first, but toward the End reddish, turbid, and acid to the Taste; then about a sixth Part of this Quantity of an empyreumatic, urinous Spirit, which ferments with Spirit of Salt, and about half an Ounce from the Pound of a thick Oil, in Consistence resembling Lard. The remaining Mass well calcin'd, yields

yields a very acrid and fiery alkaline Salt, in the Quantity of a little more than two Drams from the Pound of Fruit originally employ'd.

The Sebesten is more attenuant and resolvent than the Jujube, and has been given frequently in Peripneumonies, in Diseases of the Breast and Lungs in general, and in Stranguries, and in Hoarsenesses: It used to be a very constant Ingredient in the pectoral Decoctions, but it is now grown out of Use. The *Egyptians* use the Birdlime which they make of the Fruit of the Sebesten, sometimes externally for the resolving of schirrous Tumours, which it is said to have great Virtues in.

CHAPTER III.

MYROBALANI, *Myrobalans.*

THE Myrobalans are a dry'd Fruit, of which we have at this time five Kinds in the Shops. 1. The yellow or Citrine Kind. 2. The Indian or black. 3. The *Chebula*. 4. The *Bellericæ*. 5. The *Emblicæ*. Some have supposed that these were all the Fruit of the same Tree collected at different Periods of their Maturity; but they have err'd in that Conjecture, they are the Produce of so many different Trees.

MYROBALANUS CITRINA, *The yellow Myrobalan.*

The yellow Myrobalan is a dry'd Fruit of an oblong, and somewhat turbinated Figure, what we meet with are often an Inch and half long, and three quarters of an Inch broad; they are thick and obtuse at both Ends, and are of a yellowish Colour; they are very regularly striated in a longitudinal Direction, having five large and bold *Striæ*, usually running at pretty nearly equal Distances from End to End, and five others smaller and finer between them. They consist of a thick and tough Bark, of a gummy Structure, an angular Stone or *Nucleus*, which is also of a pale yellow Colour, of an oblong Figure, furrow'd in several Places pretty deeply, and containing a pale brown, tough, and horny Kernel, cover'd with a thin brownish Membrane. The cortical Part is all that is used in Medicine, and it is of a bitterish, austere and subacid Taste.

These Myrobalans are to be chosen sound, heavy, and such as have their cortical Part of the most gummy Kind. The Tree which produces these grows to the Height of our common Plum Tree, and its Leaves are penetrated in the manner of those of the Ash. *Johnson* in his *Dendrologia* calls it the *Myrobalanifera sorbi foliis*, but we yet want an accurate Description of it.

MYROBALANUS INDICA, *The Indian or black Myrobalan.*

The Indian or black Myrobalan is a Fruit approaching to the Nature of the yellow Kind but smaller, what we usually meet with are about three quarters of an Inch long, rarely more, and half an Inch broad at the utmost; they are of an irregular Surface; but are rather rough and corrugated, than regularly striated as the yellow; they are thickest in the middle, but obtuse also at both Ends, and are of a black Colour, both on the Surface and within, shining and looking like black Pitch: when broken they have an empty hollow within, in
the

the Place where the Stone or *Nucleus* might be expected to be found, and are probably therefore unripe when gather'd; there is sometimes the Appearance of the Rudiments of a Stone or *Nucleus* in this Cavity, but it is rare, never in any Degree of Perfection. They are moderately heavy, and tolerably hard, they have scarce any Smell, but are of a bitterish, rough, and subacid Taste, with somewhat acrid also with it; chew'd they stick to the Teeth, and fill the Mouth with Saliva. The Indian Myrobalans are to be chosen heavy, black, new and firm in their Structure. We sometimes find among them some which are a little larger, more rough and angular, and which have a Stone or *Nucleus* in the Center; it is probable that these are the same Fruit only in a riper State, and their Taste confirms this as they resemble the others, but are less austere and acrid. The Tree which produces the Indian Myrobalan is of the Height of our ordinary Plum Trees; its Leaves are long and narrow and somewhat resemble those of the Willow. *Johnson* in his *Dendrologia* calls it the *Myrobalanus Salicis folio*. The yellow Myrobalans are called by *Aëturius*, *Myrobalana Xantha*, and by the *Arabians*, *Helilegi Azafar*. These black ones are called *Indica* and *Damafonia Myrobalana* by *Aëturius*, and by the *Arabians*, *Helilegi Asuad*. *John Baubine* distinguishes them by the Name of *Myrobalani sine Nucleis*.

MYROBALANUS CHEBULA,
The Chebule Myrobalan.

The Chebule is the largest of all the Myrobalans, we sometimes meet with it more than two Inches long, and an Inch broad; it is of an oblong Shape, and is much larger at the Base, than at the Point or opposite End; they are very rough and wrinkled on the Surface, and have five very remarkable prominent Ridges running longitudinally along them. They are of a dusky brown Colour on the Surface, and when broke they appear of a dusky blackish red, and are found to be composed of a tough and tolerably thick Coat or Bark, enclosing an oblong *Nucleus* or Stone of an angular Figure, very thick and hollow in many Places, containing within it a Kernel of a fattish and unctuous Nature, and of an austere and bitterish Taste. The pulpy or cortical Matter, which is the only Part used in Medicine, is thicker in this than in any other Species of Myrobalan, and is of a subacid and austere Taste, with somewhat of Bitterness in it. The Chebule Myrobalan should be chosen large, heavy, fresh and plump, not too much wrinkled, and with the cortical or pulpy Part tough and firm.

The Tree which produces the Chebule Myrobalan differs greatly from that which produces the Citrine Kind, tho' that Fruit is of all others the most like it. Its Leaves are not pinnated but single, and resemble those of the Peach. *Johnson* calls it *Myrobalanifera Persicæ folio*: *Veslingius* describes a Tree cultivated in *Egypt*, which he calls the True Chebule Myrobalan Tree, and which is arm'd with Thorns, and always produces two Leaves from the same Pedicle, which are roundish and obtuse at the Ends; these are very different from the Leaves of the Peach, but we are not certain that he is right as to this being the Tree which produces the Fruit we are treating of. *Aëturius* calls these *Myrobalani Chebulæ*, or *Kebulæ*, and the *Arabians*, *Helilegi Kebuli*. *Caspar Baubine*, *Myrobalani maxime angulose*.

MYROBALANUS.

MYROBALANUS BELLERICA,

The Belleric Myrobalan.

The Belleric Myrobalan differs very considerably from the rest in Form, approaching to roundness much more than any of those hitherto described, tho' indeed much less than the following Species. It somewhat resembles a Nutmeg in Shape and Colour. They are usually about an Inch long, and more than three quarters of an Inch thick; tho' approaching to a round Figure, they not only deviate from it in being somewhat oblong, but they are raised in some Places into a Sort of Ridges, tho' not very prominent ones. They are of a brownish Colour not very deep, but with an Admixture of Yellowness in it, and have a thick and large Pedicle like that of our Figs; they consist of a thin cortical Part and a large *Nucleus*; the fleshy or cortical Part is not more than a tenth of an Inch in Thickness, and is of an austere, astringent and bitterish Taste. The Stone is hard, and of a pale yellowish brown Colour, and contains a Kernel of the Size of a Hazel Nut, of a roundish Figure but pointed at both Ends.

The pulpy Part of this Fruit is softer than that of almost any of the other Kinds. It is to be chosen new, sound, heavy, not too dry in the pulpy Part, and of a strong austere Taste. The Tree which produces the Belleric Myrobalan is of the Size of our Plum Tree, the Leaves are like those of the Bay, but of a paler Colour. *Johnson* calls it *Myrobalanus lauri folio subcinereo*, but we want a Description of this as much as of the rest of these Trees. The later *Greeks* call these *Myrobalans Belericæ*, and the *Arabians*, *Belilegi*.

MYROBALANUS EMBLICA,

The Emblic Myrobalan.

The Emblic Myrobalans differ from all the others in their Figure, which is very nearly orbicular; there is scarce any Difference between their Length and Diameter; we usually meet with them of about half an Inch in Thickness, but they are uneven on the Surface, being divided into six angular Faces. They are of a dark greyish Colour tending to black, and sometimes entirely black as Pitch. The cortical or pulpy Part, which is moderately thick, in Proportion to the Size of the Fruit, naturally divides into six Portions, when the Fruit is ripe, and discloses a white *Nucleus* of the Size of a Hazel Nut light and angular, and internally divided into three Cells; when thoroughly ripe it usually divides also either spontaneously, or with a very little Force into three Parts.

The Emblic Myrobalans are to be chosen new, heavy and firm, and with a thick and sound pulpy Part; we sometimes meet with them whole, but more usually we see the Segments into which the Fruit naturally divides sent us loose and separate; these have scarce any Bitterness, but are as austere and more acrid than any of the other Kinds. The Tree which produces the Emblic Myrobalan differs from all the others in having its Leaves very finely divided. It is taller than any of the others, and bears a larger Quantity of Fruit; we want however an accurate Description of this, as well as of the rest of the Myrobalans. *Ray* supposes the Tree to be the Tani of the *Hortus Matabaricus*, and *Dale* the *Nilicamaram*; but these are Conjectures that have but little Foundation.

The Myrobalans were all unknown to the Antients, and even among the modern *Greeks*, *Actuarius* seems the only one who knew much of them,

the *Arabians* were the People who brought them into Use in Medicine. We are to observe that these Fruits are very different from the Myrobalan of *Pliny*, which is our *Balanus Myrepica* or Ben Nut. All the Species of Myrobalans are the Produce of the *East Indies*; *Bengal*, *Cambaya*, and *Malabar* abound with them. The *Indians* eat them preserved in several Manners, and they serve them also for the making of Ink, and for the dressing of Leather. They all evidently contain an essential acid Salt; for blue Paper wetted in an Infusion of them in common Water, becomes reddish in the same Manner as with other weak Acids. On a chemical Analysis they all afford a copious Portion of Oil, a large Quantity of an acid Liquor, and a moderate Quantity of fixed Salt.

They have been in great Esteem in many Ages, for their Quality of opening the Bowels in a very gentle and easy Manner, and afterwards strengthening them by their Astringency. They were long in great Esteem in Diarrhoeas, Dysenteries, and all other Disorders of the Bowels, that require purging first, and binding afterwards: They were also used as Correctives to all the rougher Purges, as Scammony, and the like. They were usually given in Infusion or Decoction on these Occasions; for it was observed, that when given in Substance, they did not exert their purgative Faculty at all, but only their astringent: When this Quality was solely intended by the Prescriber, the common Way was to cut off the pulpy or cortical Part of the Fruit, and after toasting it before a Fire to reduce it to Powder.

The Decoction of them was famous also as a Gargarism for fastening the Teeth; but with all these good Qualities, the present Practice rejects all the Kinds. To the *Myrobalan* Kind there belongs also another Fruit, as it is usually esteemed, called the *Bengal Bean*, which was some Years ago greatly extolled for its Virtues.

CHAPTER X.

FABA BENGALENSIS, *The Bengal Bean.*

THE *Faba Bengalensis* is an irregularly figured Body, appearing to be a distempered or vitiated Fruit of the *Myrobalan* Kind. It is a roundish and compressed Substance, generally about an Inch in Diameter, and not only flatted, but hollowed in the Center, in the Manner of an *Umbilicus*; its Surface is rough and irregular, its Colour a pale brown; it is very hard and firm, and when cut open is of a blackish Hue; it has no Smell, but is of a styptic Taste.

It is found not unfrequently among the citrine *Myrobalans* sent from *Bengal*, and is very probably no other than the Fruit of that Tree, injured while young by the Puncture of some Insect, and by that Means thrown into a Way of Growth that makes it a Kind of Gall. It has been but lately introduced into Medicine. Dr. *Marloe* of *England* was the first who took any Notice of it; he found it among the citrine *Myrobalans*, and prescribed it under the Name of the *Faba Bengalensis* in Fluxes and Hæmorrhages with great Success; it is evidently a very good Astringent. There is great Probability that the

Account

Account *Dale* gives of its being the Fruit of this *Myrobalan*, vitiated by an Insect's Puncture is true, since we find the common Plums on our own Trees will be sometimes altered thus in their Form by the same Accident, and if wounded, will grow into distorted Shapes, and will have no Stones.

C H A P T E R XI.

COCCULUS INDICUS,

Indian Berry.

THE *Cocculus Indicus* is a small Fruit of a roundish Figure, but with a Depression or Dent on one Side; it is of the Size of a large Pea; its Surface is somewhat rugged or wrinkled, and is of a soft and friable Texture; in Comparison of most other of the Fruits of this Kind. It is light and of a brownish Colour on the Surface, and when broken is found to contain, if perfect and sound, a white Kernel of an acrid Taste, but this is very often wanting. It is to be chosen large, plump, and as little wrinkled on the Surface as may be; heavy, and with the Kernel within it; when broken it is very apt to decay, and to be worm-eaten; and in these Cases the Kernel is usually wanting, and the whole a mere empty Shell, in which Case it is of little Value; when perfect and sound, they are of a disagreeable Smell, and of an acrid and nauseous Taste. We have them from *Malabar*, and some other Parts of the *East Indies*.

The Tree which produces them is one of the *Arbores bacciferae Fructu monopyreno* of Mr. Ray. It is described by *Breynius* under the Name of the *Arbor Indica Cocculos Officinarum ferens*. Its Leaves are small, and of a cordated or Heart-like Shape; its Flowers monopetalous, and divided into five Segments, and its Fruit grow in Clusters. It is little used in the Shops being esteemed poisonous. Fishermen have a Way of mixing it into Pastes, which when eaten greedily by the Fish, make them appear lifeless for a time, and float upon the Water; and the good Women use it mixed with Stavesacre for destroying Vermin in Childrens Heads; three or four Grains of it taken inwardly have been found to bring on Nauseas and Faintings.

C H A P T E R XII.

NUX VOMICA,

The Vomic Nut.

THE Vomic Nut is a flat, compressed, round Fruit of the Breadth of a Shilling or something more than that, and of about the Thickness of a Crown Piece. Its Surface is not much wrinkled or corrugated, but sometimes marked with tolerably regular Fibres running from the Center to the Circumference; it is somewhat downy or woolly, and is of an extremely firm Texture, tough like Horn, and of a pale greyish brown Colour. It has a Sort of *Umbilicus* on each Side of the Center, and is more prominent on one Side, and more depressed on the other; it is very difficultly cut or broken, and leaves a smooth and glossy Surface behind the Knife; it is moderately heavy, and is of a somewhat paler Colour

Colour within than on the Surface ; it has no Smell but is of an extremely bitter Taste.

Nux Vomica is to be chosen in moderately large and thick Pieces, sound and firm ; it is subject to be worm-eaten, in which Case it is friable, dusty, and is of no Value.

The *Nux Vomica* was not at all known to the ancient *Greeks*, nor are we clear in it, that the *Arabians* were acquainted with it ; though what they have left us concerning what they call *Nux Methel*, seems to agree very well with it.

We have it only from the *East Indies*, whence it is brought with another Drug called the *Lignum Colubrinum*. Though it has been but lately known, there have been many Disputes between the People, who have seemed best acquainted with it at first, as to its Nature and Origin. It was held by many to be a Root of a Plant, and by others to be a *Fungus* or an Excrescence. But it is in Reality the *Nucleus* of a Fruit of an *East Indian* Tree ; the Wood of which is the *Lignum Colubrinum* of the Shops.

This Tree is one of the *Arbores pruniferae Fructu corticoso molliore* of Mr. Ray. It is described under the Name of the *Caniram* in the *Hortus Malabaricus*, *Nux Vomica major et Officinarum* in the *Prodromus Paradisi Batavi*, and by Mr. Ray, under that of *Malus Malabarica Fructu corticoso amaricante Semine plano compresso*. It is a tall and spreading Tree ; its Leaves stand in Pairs, and are oblong, broadest in the Middle, and terminate in an obtuse or rounded Point ; both these and the Bark are very bitter to the Taste. The Flowers stand in Clusters or Umbels at the Joints of the younger Branches ; the Fruit is round and like an Apple, green at first, but afterwards yellow, and consists of a hard but thin Rind, and a white pulpy Matter enclosed : In each Fruit there are contained fifteen of the Seeds, or *Nuces Vomicae*, disposed in three Series, but all in the same Cell. The *Indians* give a Decoction of the Root of this Tree in small Doses as a Purge ; but they say, that in large Quantities it is poisonous ; and they pretend, that a continued Use of the Seeds in small Quantities renders them incapable of receiving any Hurt from the Bites of Serpents.

We find them a certain Poison to Dogs, Cats, and all Kinds of Quadrupeds, as also to Birds. Taken internally in small Doses they disturb the whole human Frame, and bring on Convulsions ; and it is generally asserted, that in a Dose of two or three Drams they are fatal. We find however that many have concurred in ranking them among the Alexipharmics ; and it is certain that there have been Compositions in which this Fruit is an Ingredient, and that not in small Quantity, which have been taken not only without any ill Effect but with a very good one. Some have prescribed small Doses of the *Nux Vomica* as a Specific against a Gonorrhoea, and others against Quartan Agues. But we have so many good and safe Medicines for all these Purposes, that there seems no Occasion for our having Recourse to such as these, which shew so many Signs of Mischief.

There is another Species of the *Nux Vomica* described by *Braynius*, and in the *Hortus Malabaricus* under the Names of *Modira Caniram*, and *Nux Vomica Officinarum vera*. *Commelin* determines this Tree, not the former, to afford the true *Nux Vomica* and the true *Lignum Colubrinum* of the Shops, and *Herman*, on the other hand, is as positive as to the other. It is probable, that as the Trees

are much alike in their Fructification, and in their Qualities, the Wood and the Kernels of the Fruit of both are indiscriminately sent over to us under these Names. There is also yet another Kind of the *Nux Vomica*, sometimes met with in the Shops, which is much smaller than the former, scarce exceeding the Breadth of a Sixpence; otherwise it is very like them, and has all their Qualities. This is the Fruit of another Tree of the same Genus called *Scheru-Katu-Valli-Caniram*, and the Wood of either of the other Trees is sent sometimes to us under the Name of *Lignum Colubrinum*. This Tree is the true and genuine one that furnishes the officinal Wood. But of this see among the Woods.

C H A P T E R XIII.

FABA SANCTI IGNATII, *St. Ignatius's Bean.*

THE *Faba Sancti Ignatii*, in many Particulars, very much resembles the *Nux Vomica*, and even in its Qualities, however much boasted of as a Medicine, while the other is condemn'd as a Poison, does not differ very widely from it.

It is a dry and hard Fruit, or Kernel of a Fruit, of the Size of a large Hazel Nut, of an irregularly roundish Figure, extremely hard and variously knotty, protuberant and uneven on the Surface. It is of an extremely close and firm Texture, very heavy, and not easily cut with a Knife, but when cut it leaves a very smooth and glossy Surface. Its Colour is a pale brown, or blueish grey, somewhat like that of the *Nux Vomica*, and in thin Pieces; it is somewhat transparent, and seems of a Kind of horny Substance. It has no Smell, but is of an intensely bitter Taste, resembling that of the Seeds of Citrons in Flavour, but vastly greater in Degree. The *Faba Sancti Ignatii* was wholly unknown to the antient Greeks. The Jesuit Missionaries lately brought it from the *Philippine Islands*, with great Accounts of its Virtues. The *Spaniards* call it *Cathalogon* and *Pepita de Bisayas*; the *Indians* *Mananag*; and Father Camelli is of Opinion, that this is the true *Nux Metbel* of *Serapio* and the *Arabians*, not the *Nux Vomica*, but that is not sufficiently ascertain'd.

The Plant which produces the *Faba Sancti Ignatii* is one of the *Pamiferae* of Ray. It is described by Father Camelli, in the *Philosophical Transactions* of London, under the Name of *Catalongay* and *Centara*; and by Plukenet under that of *Cucurbitifera Malabatbri foliis scandens cujus Nuclei Faba Sancti Ignatii nuncupati*. It is of the number of the climbing Plants, and twists itself about whatever Trees are near it, running up them to a very great Length. Its Stalk is porous and light, but it is of a woody Nature, and often is as thick as a Man's Arm. Its Leaves are large, undivided, and rib'd very high. The Flower is like that of the wild Pomegranate, and the Fruit is of the Gourd Kind, larger than a Melon, and is cover'd externally with a fine thin and tender Skin, of a glossy Hue, and under that with a woody Rind, within which is contain'd a yellowish pulpy Matter and in it the Seeds, usually about twenty four to each Fruit; these are nearly as large as a Walnut when fresh, but they shrink to that of a Hazel Nut in drying, and to this shrinking is owing their extreme Roughness

ness and Irregularity on the Surface. The *Indians* have a wonderful Opinion of the Virtues of this Fruit, they esteem it an universal Medicine fit for all Diseases, all Ages, and all Constitutions; and even think that it has the Power of preserving them from them by only being hung about the Neck; and they imagine that the Bite of the most venomous Serpent can do them no Hurt while they wear it. They give it internally but in very small Doses; and we have Accounts of its ill Effects when taken only in the Quantity of a Scruple, which very much agree with those of the *Nux Vomica*, and prove it a very improper thing to be brought into Use as a Medicine without proper Caution. *Camelli* tells us of a Man who took such a Dose of it, and was thrown into Tremblings, attended with violent and frightful Convulsions, so that he cou'd scarce stand on his Feet, and had his Face contracted into a thousand frightful Figures; yet this without any Alteration in the Pulse, or in this Case any succeeding bad Symptom. And of another, who, on swallowing a whole Fruit, was thrown into a much more deplorable Condition, and would probably have perished if proper Assistance had not been afforded him. It usually occasions vomiting with Convulsions: Sometimes Purgings of a violent Kind when taken by the *Europeans*, but the *Indians* escape these Effects of it.

The Cases in which it is most celebrated, are Vertigoes, Lethargies, Epilepsies, Asthmas, Quartan Agues, and Worms. It is also given against Distemperatures of the Stomach, and as an Alexipharmic against Poison, and the Bites of venomous Animals. The usual Way of giving it is not in Powder but in Infusion, which is made by only steeping it in some hot Water till that Liquor has acquired a considerable Degree of Bitterness. Ten or twelve Grains of the Powder are a Dose when it is intended to vomit the Person, and are to be given about an Hour after eating: In smaller Quantities it acts as a Sudorific: It is so difficultly powder'd that the usual Way is to rasp it fine with a File or Rasp, and these Raspings put into Wine soon dissolve into a pappy Substance, and are in that State easily swallowed. *Bernard Valentine* and *Wedelius* speak much in the Praise of this Medicine in Fevers given in proper Doses. A Tincture of it is easily drawn with Spirit of Wine, which is a very good Method of giving it, as it never operates so violently as the Fruit in Substance.

Upon the whole it appears that the *Faba Sancti Ignatii* is a very powerful Medicine, that much good may be done with it, but that it is of the number of those which are to be used with Caution. The Tincture is safe, even to Children, and is one of the best known Remedies for their Convulsions, when arising from their most common Source, Disorders in the *Primæ Viæ*.

CHAPTER XIV.

BACCÆ ALKEKENGİ, *Winter Cherry Berries.*

THE *Bacca Alkekengi* is a Fruit of a very singular Kind. It is of the Size of a common Cherry, round, and of a smooth Surface while growing, but wither'd and rumpled when it dries. It is of a beautiful red Colour, and is composed of a thin membranaceous Covering, within which there lies a soft pulpy Substance, of an agreeable subacid Taste at first taking it into the Mouth, but

but afterwards bitterish ; in this are contained several small Seeds of a round but flatted Shape, and of a yellowish Colour. This Berry does not stand naked on the Plant, but is enclosed in a thin membranous Case inflated in the manner of a Bladder, and is brought with this Membrane about it into the Shops. It is to be chosen fresh, plump and soft, not pappy or rotten, nor too dry, of a good Colour, and with the membranous Bladder about it large and fair.

The Plant which produces it is one of the *Pentandria Monogynia* of *Linnaeus*, and of the *Herbæ Bacciferæ* of Mr. Ray. It is described by all the botanical Writers under the Name of the *Alkekengi*, *Solanum Vesicarium*, and *Halicacabum*. *Cordus* calls it *Vesicaria* and *Brunfelsius saxifraga rubra*. Its Roots are small and fibrous, its Branches hard and strong ; its Leaves are broad and oblong, and stand in Pairs at every Joint. It grows to two or three Feet high, and bears on the upper Parts of the Branches white Flowers like those of the *Solanums* or Nightshades. These stand in a round Cup which is at first small and green, but by degrees grows larger, and extends itself over the Berry, forming the Bladder or loose Membrane it is cover'd with, which is often as big as a Walnut and of a red Colour when the Berry is ripe, and is mark'd with five remarkably high Ribs which give it a sort of Pentagonal Figure. The Plant is common in *France* and *Germany*: We have it not wild with us, but it is very common in the Gardens of the Curious.

The Berries of the *Alkekengi*, chymically analysed, yield first a limpid, inodorous and insipid Phlegm, afterwards a Phlegm of a subacid and saline Taste ; after this comes over a very strongly acid and austere Phlegm, in a moderately large Quantity ; and after this a reddish, empyreumatic, acid and acrimonious Liquor ; and finally a thick Oil like Butter, in about the Quantity of two Scruples from the Pound of the Fruit. The Remainder in the Retort, burnt in an open Fire, and the Ashes lixiviated, yields a very considerable Portion of a fix'd alkali Salt like that of Tartar ; there may near a quarter of an Ounce of this Salt be separated from every Pound of the Berries, which those who are used to chymical Analyses of Bodies of this Kind will know to be a very large Proportion. It is singular also in this Fruit, that it yields no con-creted volatile Salt, nor not the least Drop of an urinous Spirit, the latter of which, in greater or less Quantity, is almost universal in Bodies of this Kind.

The *Alkekengi* Berries stand recorded for very great Virtues as a Diuretic. They may be eaten crude, or candy'd in the manner of other Fruits in Sugar ; five or six Berries are a Dose. They often bring away Gravel and ease nephritic Pains ; they are also good in the Jaundice, and in many other chronic Complaints ; but at present they are very little used, and scarce to be met with in the Shops.

CHAPTER XV.

BACCÆ AGNI CASTI,

Agnus Castus Berries.

THE *Baccæ Agni Casti* are a small roundish Fruit, about the Size of an ordinary Pepper-Corn, and of a dusky greenish brown or olive Colour. Their Surface is variously corrugated or wrinkled ; they are soft and

and not very heavy, and they consist each of a thin membranaceous Covering, within which is a soft pulpy Matter enclosing four small, oblong and slender Seeds, which are very small in Proportion to the Size of the Berry, and are each enclosed in its separate Cell. The Berries have no very remarkable Smell; but they are of an acrid and somewhat disagreeable Taste; they are to be chosen fresh, large, and full grown, not too dry, nor soft enough to crush easily between the Fingers, for such are usually rotten. They are to be of a strong Taste; they lose much of this when long kept, and with it their Virtues.

The Shrub which produces these Berries is one of the *Didynamia Angiospermia* of *Linnaeus*, and one of the *Arbores fructu calyculato* of Mr. Ray. It is described by all the botanical Writers under the Names of *Vitex* and *Agnus Castus*. *Matthiolum* calls it *Salix Amerina*, and *Lobel*, *Elæagrion Theophrasti*. It is a small Shrub, growing rarely to more than four or five Feet high; its Branches are tough like those of the Willow or Osier, the Leaves are of the digitated Kind, and resemble those of Hemp; they are composed of four, five, or more, which are oblong, narrow, and notch'd at the Edges; they are of a dusky green on the upper Side, and of a silvery white beneath. The Flowers stand in Clusters round the upper Parts of the Twigs and form a Kind of Spikes. They are small and purplish, or variegated with purplish and white; these are succeeded by the Berries already described.

The Berries of the *Agnus Castus* are good in Hysterical Complaints. They have been greatly celebrated as Suppressors of Venery, and it has been said that a Man need only take them regularly for some time to get the better of all venereal Desires; but on the other hand it is affirm'd by many, who have try'd them, that they are really Provocatives; it would be easy perhaps to determine, which of those contrary Opinions is right; but the Fruit is at present wholly rejected, and not to be met with in the Shops.

CHAPTER XVI.

NUX CUPRESSI,
The Cypress Nut.

THE Fruit improperly called Cypress Nut, as not at all of the Nut Kind, is oblong or roundish, of a hard and almost woody Texture, and of a dusky brown Colour; it is of the Size of a large Nutmeg, and of an extremely rough Surface, full of Prominences and Depressions, and of very deep Cracks and Fissures, which sometimes divide it as it were into several Portions or Tubera of a clavated Form, large at the Surface, and smaller as they approach the Center. In the Commissures of these are lodged the Seeds which are small, oblong, and of a brownish Colour, with some Admixture of reddish, and are rounded at one End and pointed at the other.

The Tree which produces this Fruit is one of the *Monæcia Monadelphica* of *Linnaeus*, and one of the *Frutices coniferæ fructu a flore remoto* of Ray. It is the common Cypress described by Authors under the Name of the *Cupressus vulgaris*, and by them divided into two Kinds, a Male and Female, the one described under the Name of the *Cupressus mas*, and *Cupressus mas ramos extra se spargens*, the other *Cupressus fœmina*. They are easily distinguish'd by the Characters.

Characters expressed in their Names, the one being branch'd, the other growing with a strait small Head. The Wood is hard, reddish, and strongly scented, somewhat like that of the Saunders. The Leaves are narrow and like those of the Tamarisk, they remain green all the Winter. The Male Flowers are stameneous, and on other Parts of the same Tree stand the Rudiments of the Fruit, which after the Farina is shed from the others ripen into the Bodies already described.

The Cypress Nutis a very powerful Astringent and Balsamic. In Diarrhoeas and Dysenteries there is scarce any simple Medicine preferable to it. It is also said to be a very good Febrifuge, but with all these Virtues it is very little regarded at present in the Shops.

F R U I T S used fresh.

CHAPTER I.

FRUCTUS CYNOSBATI,

Heps.

THE *Fructus Cynosbati*, commonly known by the Name of Heps, are a Fruit of an oblong Figure, thickest in the middle, and growing smaller toward each End, of a red Colour, soft when ripe, and consisting of a pulpy Matter, of a very agreeable tartish Taste, enclosed within a thin Skin or Rind, and surrounding a great Number of small, whitish, hairy, and very rough Seeds.

The Shrub which produces it is sufficiently known under the Name of the common Briar or Dog Rose. It is one of the *Icosandria Pentagynia* of *Linnaeus*, and of the *Frutices fructu umbilicato minore* of *Ray*. It is truly of the Rose Kind, and is distinguish'd by the botanical Writers under the Name of *Rosa sylvestris inodora sive canina*, *Rosa sylvestris alba cum rubore, folio glabro*, and *Rosa canina inodora*. It grows to six or eight Feet in Height; but its Stem is so slender, that it is not able to support itself at this Height unless it be situated among other Bushes. The Rind is of a brownish Colour on the older Branches, and green on the young Shoots, and is beset with a great Number of strong sharp and hooked Prickles. The Leaves are of the pinnated Kind, composed of a Number of others which are oblong and broad, serrated about the Edges, and of a glossy green Colour. The Flowers are as broad as a half Crown or more, and are perfectly like the common single Roses but smaller; they are white or pale red, and are succeeded by the Fruit already described, the Embryo of which is situated under the Cup of the Flower; and consequently that Cup is protruded by it, and affix'd to its farther End till it falls off.

A Pound of the Pulp of Heps separated from the Membranes and Seeds, as for making the Conserve, distill'd in a Retort, yields first about five Ounces of a colourless Liquor, clear, of no remarkable Smell, but of a faintly acid Taste, with something vinous in it; after this there come over about eight Ounces of a Liquor at first clear and colourless as the former, but of a more strongly acid Taste, less pleasant and somewhat austere, and toward the last Runnings somewhat brownish and very acid, and withal very austere; after this come over
about

about two Drams of a yet browner Liquor, of a very empyreumatic Smell, of an acrid Taste, but with an evident Mixture of an urinous Alkali with it; and finally about two Drams of Oil, great Part of it fluid and thin, but some of the last running very thick and like Treacle. The Remainder in the Retort, calcined and lixiviated, yields about two Scruples of a fix'd alkaline Salt.

The Heps are esteemed attenuant and diuretic, but they are little used, except in the Conserve, which is a very pleasant one, and serves very conveniently to reduce the worser tasted Ingredients, of an Electuary or Linctus into Form.

CHAPTER II.

CYDONIA,
The Quince.

THE Quince is a large Fruit, of the Shape and Size of a large Pear: Its Rind is not very thick, but it is cover'd with a great deal of downy or woolly Matter. The pulpy Part is juicy when ripe, but of an austere and astringent Taste; and the Seeds, which are contain'd in it, as those in the Apple or Pear, are oblong, or of an oval Figure, somewhat flatted, and of a dark blackish Colour; when taken into the Mouth they are insipid, but extremely mucilaginous.

The Tree which produces this Fruit is one of the *Icosandria Pentagynia* of *Linnaeus*, and one of the *Arbores fructu umbilicato majore sive Pomiferæ umbilicatæ* of *Ray*. It grows to no great Height, and its Branches are irregular in their Growth, and usually bent and crooked. The Bark is brown and rough, the Leaves are moderately large, oblong and broad, smooth at the Edges, and terminate in an obtuse Point; they are of a deep green on the upper Side, but white and woolly below. The Flower is moderately large and of a white Colour, with a Blush of red in it. It is composed of five Petals, expanded in a circular Form. The Cup is divided into five Segments, and when the Flower is fallen, the Embryo placed under it enlarges by Degrees into the Fruit just mentioned. The Tree is very frequent in our Gardens, and is described by Authors under the Names of *Malus Cydonia* and *Cotonea*.

A Pound of the pulpy Part of ripe Quinces, distill'd in a Retort. yields first between four and five Ounces of a clear and colourless Liquor, of an obscurely acid Taste; after this there comes over nearly double that Quantity of a Liquor still clear and colourless; the first Runnings of which are more strongly acid than the former, and the last very austere; after this comes over a small Quantity, about three Drams, of a brownish empyreumatic Liquor, very strongly acid, and very austere; and finally about half a Dram of a thick and coarse Oil. The Remainder in the Retort, calcined in an open Fire and lixiviated, yields somewhat less than a Scruple of a fix'd alkaline Salt.

The Seeds of the Quince are much used in making a Mucilage, which is cooling and emollient, and obtunds the Acrimony of the Humors. The Fruit itself is astringent and stomachic, but the principal Use of it in the Shops is in the *Syrupus Cydoniorum* prepared from its Juice with Sugar; this is a very pleasant Syrup, but sometimes has accidental bad Qualities, whole Quantities of it having proved emetic from the Inadvertency of the Apothecary in suffering it to stand too long in the Copper Vessel in which they usually make it.

CHAPTER

CHAPTER III.

MORUS,
The Mulberry.

THE Mulberry is a Fruit of an oblong Figure, very succulent, and of an uneven, and as it were granulated Surface; of a green Colour at first, afterwards red, and when ripe of a blackish Purple. It is of a very agreeable Taste, and its Juice stains every thing it touches: It is composed of an Axis which is oblong, and not very thick; and to which are affixed on every Part a Number of little globular or oval Bodies, seeming so many separate and distinct Berries, which by their Union form the compleat Mulberry; the Seeds are roundish.

The Tree which produces it is well known to us under the Name of the common Mulberry. It is one of the *Monæcia Tetrandria* of *Linnaeus*, and of the *Arbores Fructu aggregato* of *Ray*. It is distinguished by the botanical Writers by the Name of *Morus vulgaris*, *Morus nigra*, and *Morus Fructu nigro*. It grows to twenty or thirty Feet in Height; its Bark is very rough, and of a deep dirty brown Colour, frequently cracked and chopped in many Places. The Leaves are large, oblong, and broad, serrated at their Edges, and terminating in a Point; they are of a bright green Colour while young, but darker afterwards, and are very rough to the Touch. The Flowers grow in different Parts of the Tree from those where the Fruit grow; they are of the amentaceous Kind, and consist each of a Cup composed of four Leaves, with the *Stamina* rising from it. It is not a Native of *England*, but the Pleasantness of the Fruit has made it be universally cultivated in our Gardens.

The Fruit while unripe is very astringent, but when thoroughly ripe it is of a contrary Quality, rather purgative, cooling, and very pleasant, quenching Thirst. The principal Use now made of it in the Shops is in the Syrup, which is made of the Juice of the ripe Fruit and Sugar, and is a very pleasant and cooling.

CHAPTER IV.

RIBESIA NIGRA,
Black Currants.

BLACK Currants are a Fruit considerably larger than the common red ones, they are of a roundish Figure and black Colour, and consist of a thin Membrane, surrounding a Number of hard Seeds lodged in a Quantity of Juice, in the same Manner as in the common red or white Currant. They are of a disagreeable Taste, sour and faintish if ever so ripe, but when baked with Sugar, they become much more pleasant.

The Shrub which produces them is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Frutices Fructu umbilicato minore* of *Ray*. The botanical Writers have distinguished it by the Names of *Ribes nigrum vulgo dictum folio olente*; *Ribesium Fructu nigro*, and *Grossularia non Spinosa Fructu majore nigro*,

nigro. It grows to about three Feet in Height ; its Stem is slender and brittle, and is covered with a smooth Bark of a darker Colour toward the Bottom, and paler toward the upper Parts. The Leaves in some Degree resemble those of the common Vine ; they are broad and divided somewhat deeply into several Segments, serrated about the Edges, and of a deep green on the upper Side, where they are smooth, but somewhat paler and hairy underneath ; when bruised they have a very strong and disagreeable Smell. The Flower consists of five small Petals, and is supported by a Cup divided in the same Manner into five deep Segments ; these are succeeded by the Fruit already described ; the Root is firm, spreading, and very lasting. The Shrub is a Native of *England*, though not common with us. It always grows near Waters in its wild State, and is found most abundantly about the Banks of Rivers in the Northern Counties, though it has been met with wild in *Warwickshire* and some other of the less remote Counties. It is cultivated very frequently in Gardens for the Sake of the Fruit, of which some People make Tarts ; but it is more used in Medicine than at Table. The *French* call it *Cassis*, and are very full of the Opinion that it has more Virtues than many of the more generally received Plants of the Shops. The Leaves are given in Powder or Infusion, or their Juice expressed and drank, or in Defect of these, the Bark of the Root ; either Part is recommended in Dropsies, and many other chronic Diseases. But the great Virtue is against the Bite of a mad Dog, or of any other venomous Animal. They not only give the Leaves or Bark internally on these Occasions, but bruise them and apply them to the Wound. We have not brought the Leaves into Use in *England*, and cannot therefore determine what Right they have to the Praises bestowed on them by our Neighbours. The Berries are the only Part we use ; they have been long famous in *England* for Quinsies and sore Throats, and had thence obtained the old Name of Squinancy or Quinsiey Berries. But the Use of them had been some time neglected on these Occasions, when Mr. *Baker*, having received Benefit by them, recommended, and in some Measure lately brought them into Use again.

A Pound of ripe black Currants, distilled by the Retort, yield first about four Ounces of a clear and colourless Liquor, of an agreeable Smell and of a sweetish Taste at first, but toward the last Runnings somewhat acid ; after this there come over about nine Ounces of a Liquor still clear and colourless, at first somewhat more strongly acid than the former, and afterwards much more so, and towards the last Runnings austere, and of an alkaline and urinous Taste mixed together ; after this comes over a very small Quantity, between two and three Drams, of a brownish and empyreumatic Liquor, partly of an acid, and partly of a volatile alkaline Nature ; and finally about a Dram and half of a thick Oil like Treacle. The Remainder in the Retort, calcined and lixiviated, yields about a Scruple of a fixed alkaline Salt.

PARTS of VEGETABLES

Used in M E D I C I N E.

CLASS the SIXTH.

S E E D S.

The Seeds commonly used in Medicine are the following.

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|----------------------------------|---------------------|----------------------|
| 1. ANISE SEED. | 9. SMALLAGE SEED. | 18. MELON SEED. |
| 2. CARAWAY SEED. | 10. HARTSWORT SEED. | 19. CARTHAMUS SEED. |
| 3. CUMMIN SEED. | 11. THLASPI SEED. | 20. HEMP SEED. |
| 4. CORIANDER SEED. | 12. MUSTARD SEED. | 21. NAVEW SEED |
| 5. FENNEL SEED. | 13. LIN SEED. | 22. RICINUS SEED. |
| 6. MACEDONIAN PARS- LEY SEED. | 14. WORM SEED. | 23. SORREL SEED. |
| 7. DILL SEED. | 15. FÆNUGREEK SEED. | 24. PSYLLIUM SEED. |
| 8. BISHOPSWEEED SEED. | 16. CUCUMBER SEED. | 25. STAVESACRE SEED. |
| | 17. CITRUL SEED. | 26. HENBANE SEED. |
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Of S E E D S.

CHAPTER I.

SEMEN ANISI,
Anise Seed.

ANISE Seed is a small Seed of an oblong Shape, ending each Way in an obtuse Point; its Surface is very deeply striated, and it is of a soft and lax Substance, very light and easily broken. Its Colour is a Kind of pale Olive or greenish grey; it has a very strong and aromatic Smell, and a sweetish but acrid Taste, in the whole however not disagreeable.

The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of *Ray*. It is described by the botanical Writers under the Name of *Anisum vulgare*, *Apium Anisum dictum*, and *Cuminum dulce*. The Root is small and fibrous, the lower Leaves roundish, but divided into three Parts; but the upper ones are finely divided into long and narrow Segments. The Stalk is hollow and branched, and the Flowers grow in Umbels, and are succeeded each by a Fruit consisting of two of the Seeds, which are the Anise of the Shops. Anise Seed is to be chosen large, fair, new, and

new and clean, of a good Smell and acrid Taste. The Plant is cultivated in many Parts of *France*, but the finest Seed comes from the Island of *Malta*, where it is raised for Sale, and whence a great Part of *Europe* is supplied.

The whole Plant of the Anise, distilled fresh in a *Balneum Mariæ*, yields a limpid, but strongly scented Water, in the Quantity of one fifth of its Weight; and after this, of an acid Liquor, twice the Quantity of the former; and with this a small Quantity of the essential Oil. The Herb remaining in the Alembic, if then put into a Retort, and the Distillation continued, yields about a Quarter of an Ounce from the Pound of a Liquor evidently containing both an acid and an alkaline urinous Salt, and about half that Quantity of an essential Oil, partly thin and fluid, partly of the Consistence of Butter; and the Remainder calcined in an open Fire and lixiviated, will yield near a Dram and half of an alkaline Salt from the Pound of the Herb.

The Seed abounds greatly in essential Oil, which is easily separated from it by Distillation, and which it affords in very different Quantity, according as it is new or old, and as it has been gathered mature or unripe. The Seed is bruised and steeped in Water for twenty four Hours, and then distilled for this Oil; there comes over a strong scented Water with a large Quantity of it swimming on the Surface, which is to be separated and kept for Use. There is also a Way of obtaining an expressed Oil from it; to this Purpose the Seed is bruised and held over the Vapour of boiling Water, till thoroughly heated and moistened by it, and then committed to the Press, where it is to be strongly pressed; by this means there will be obtained a greenish, well scented, sweet, and pleasant Oil, in the Quantity of an Ounce more or less from the Pound of the Seeds. This Oil, as well as the distilled one, are fluid in warm Weather; but they both concrete with the least Cold into a Substance like Butter.

Anise Seed has long been in great Reputation in the Shops; it stands at the Head of the four greater hot Seeds, the other three being those of Carui, Cummin, and Fennel; it is a very celebrated Carminative. The old Writers extol it as a Stomachic, and prescribe it in all Cases of bad Digestion, from what they call Coldness of the Stomach, also in Cholics, Hiccoughs, Pains in the Head, and in Diarrhoeas; and in all these Cases it is at this Time found to succeed very well. It is said to be good to occasion a Supply of Milk in those who suckle Children; it is of excellent Service in the Gripes and Tormina of Children which arise from a tough Phlegm, as it acts on these Occasions as an Attenuant and Dissolvent of no mean Kind. It also gives Relief in the Convulsions Infants are often subject to from bad Concoction of their Food, given in Powder, in Doses of five, ten, or more Grains. It is found to purge Children very safely and certainly; it is good in Difficulties of breathing, and in Pains of the Breast, which have their Origin from a tough viscid Phlegm. It promotes the Discharge by Urine, and is very happily joined with Purges to prevent their griping in the working. The Seed is given in Powder from ten Grains to thirty, but the Oil by Distillation is much more frequently used, and answers all the same Purposes. The Seed in Decoction however is better than the Oil in Cholics; the Dose of the Oil is from five to fifteen Drops. The Oil is used externally by some against the Gripes in Infants, by anointing the Navel with it. The distilled Spirit of Anise Seed has also been long famous

famous in the Shops as a Cordial and Carminative : It has been sometimes made by Fermentation of the bruised Seed in Water, but the more frequent Method now is to impregnate common Molasses Spirit with the Oil of the Seed by Distillation.

Anise Seeds have been formerly made an Ingredient in many officinal Compositions, but at present their known and strong Taste has excluded them from many of them, though perhaps to the Disadvantage of the Patient. Oil of Anise Seed is frequently mixed, a Drop or two for a Dose, in purging Pills, in which Case it answers the double Purpose of dissolving the resinous Particles of the Medicine, and of preventing Gripings in the Working. There is a way of candying the Seed in Sugar, in which Form it is pleasant, and does great Service in Disorders of the Stomach from Indigestions.

CHAPTER II.

SEMEN CARUI,
Carraway Seed.

CARRAWAY SEED is a small Seed, of an oblong and slender Figure, pointed at both Ends and thickest in the Middle. It is rounded or gibbous on one Side, and flatted on the other, and is deeply striated on the Surface : It is considerably heavy, easily bruised in a Mortar, and grows damp and unctuous in the doing it. Its Colour is a deep brown, its Surface perfectly free from Hairyness, and somewhat bright or glossy. It is of a very penetrating Smell, not disagreeable, and of a hot, acrid, and bitterish Taste. Carraway Seed is to be chosen large, new, and of a good Colour, not dusty, and of a strong agreeable Smell.

The Plant which produces the Carraway Seed is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. It is described by all the botanical Writers under the Names of *Carum*, *Careum*, *Carui*, and *Cuminum pratense*. Its Root is long and as thick as a Man's Thumb : Its Stalk is hollow, striated, and not hairy : Its Leaves are finely divided, and of a dusky green Colour. The Flowers are small and white, and stand in Umbells on the Tops of the Stalks and Branches ; the Seeds which follow these stand two together, with their flat Sides joined one to the other. It grows wild in the Meadows of *France* and *Italy*, and in many other Places ; but it is sown in Fields, for the Sake of the Seeds, in *Germany*, and many other Parts of *Europe*.

Chemically analysed it yields a very large Quantity of essential Oil, and if the Distillation be made in a Retort, no small Portion of a Liquor, containing evidently both an acid and a urinous Salt, is obtained. The Oil proper for internal Use is made by bruising and steeping the Seed in Water, and then distilling it in the Alembic in the common Way.

The Seed is stomachic, diuretic, and carminative : It is one of the four greater hot Seeds of the Shops : It discusses Flatulencies, promotes Digestion, and is a very speedy Remedy in cholic Pains, but it is apt to heat and irritate too much, and therefore its Use is to be carefully avoided, whenever there is suspected to be Danger of an Inflammation. The Seed is given in Substance from

from five Grains to twenty-five; the Oil from one to six or eight Drops: The most convenient Way of giving this is drop'd on some powder'd Sugar. The Root of the Plant, where it is to be had fresh, is esteem'd in many Cases preferable to the Seed. It is a common Ingredient in diuretic Apozems among the *Germans*. A Decoction of the Seeds, apply'd by way of Fomentation externally to the Belly, is often found to give Relief in the Cholic; the essential Oil mix'd with that of Wormwood, and with Oil of Almonds, is sometimes used also by way of Liniment on the same Occasion, and with great Success. Caraway Seed is an Ingredient in many of the officinal Compositions, and has been so formerly in many more, but its Taste is now so well known, that its Use is in a great measure avoided. It is a very common Ingredient in our Foods, and scarce any of the light Cakes are made without it.

C H A P T E R III.

SEMEN CYMINI,
Cummin Seed.

CUMMIN SEED is a long and slender Seed, scarce so thick as the Anise Seed, but nearly of twice its Length. Its Surface is striated with several deep longitudinal Furrows: It is prominent and gibbous on one Side, and flattened on the other, and usually grows somewhat crooked in the drying. It is of a tough and firm Texture, not so easily powder'd as some of the other Seeds, unctuous when bruised, and of a dusky greenish brown Colour. It is of a very strong but not disagreeable Smell, and of an acrid and pungent Taste.

Cummin Seed is to be chosen new, large and clean: It is very subject to decay with keeping, and when it is broken or dusty, and has lost its Smell in a great Degree, it is to be rejected: It is very subject also to breed Insects and be Worm-eaten: If, when a Quantity of it is taken up in the Hand, the Seeds are found hanging together in Clusters in several Places, it is a Proof of Insects among it, and that it is not fit for Use.

Europe is in a great measure supply'd with Cummin Seed from the Island of *Malta*, where it is cultivated in Fields as Corn with us. The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and one of the *Herbæ umbelliferae* of Mr. Ray. Its Root is fibrous: Its Stalk seldom grows to more than twelve or fourteen Inches high: Its Leaves are finely divided like those of Fennel, but much smaller, and the Segments not so thin. The Flowers are small and white, and stand in round and small but compact Umbells; the Seeds succeed to these and stand two together with their flat Sides joined. All the botanical Writers have described the Plant, they call it *Cuminum*, and *Feniculum Orientale*, or Oriental Fennel.

Cummin Seed, on a chemical Analysis, affords a large Quantity of an essential Oil, and of an austere and ill tasted Phlegm, containing an acid, and with it an urinous Salt. It is a very good Carminative and Stomachic. It is given with great Success in Cholics, and often in Vertigoes, and other Diseases of the Head, which have their Origin from Disorders in the Stomach. It is used externally in Cataplasms and Fomentations with great Success, wherever a

warm

warm Discutient is required. Cummin Seed bruised, put into a Bag and moistened by sprinkling Brandy over it, is frequently apply'd to the Belly in Cholics, and that with Success.

The essential Oil of Cummin Seed, drawn by Distillation with Water in the Alembic, is one of the best Carminatives the *Materia Medica* affords us; it is less pleasant indeed than that of Anise or Carraway, but it is greatly more efficacious. Its Dose is two or three Drops on Sugar, and in this small Quantity it seldom fails of giving immediate Relief in the most racking Pains of the Cholic. The good Women have also a Way of dropping it on a Piece of hot Bread, and applying it externally in uterine Complaints. The Seed is an Ingredient in several of the Shop Compositions, intended for external as well as internal Use. There is a Plaister nam'd from it, and it has been prescribed in most of the old purgative Electuaries.

C H A P T E R I V.

SEMEN CORIANDRI, *Coriander Seed.*

TH E *Semen Coriandri* is a Seed of a very remarkable Figure: It is pretty regularly hæmispherical, or of the Shape of half a Globe. We usually see it in its natural Way of growing, which is two of these Seeds join'd together by their flat Sides, in which Case it represents an entire and pretty regular Sphere. The two Seeds thus join'd are of about half the Bigness of a Pea, of a tolerably smooth Surface, and of a friable Texture. They are very light and easily powder'd, not so unctuous and moist when bruised as many of the other Seeds, and of a pale whitish Colour. Coriander Seed is to be chosen new, sound and firm, of an agreeable aromatic Smell and pleasant Taste, less pungent than that of the other carminative Seeds, but yet far from insipid. It is very apt to be destroy'd by Insects, and when Worm-eaten, dusty, and too light, is to be rejected.

We have our Coriander Seed from *France* and *Germany*, where it is cultivated in great Plenty. The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. All the botanical Writers have described it under the Name of *Coriandrum majus*, and *Coriandrum*. Its Root is long and slender, usually single, and furnished with but few Fibres; its Stalk is rounded, smooth and hollow, but fill'd up with a spongy Pith. It grows to about two Feet high; its lower Leaves are rounded and finely notched at the Edges; its upper ones are divided into small and narrow Segments. The Flowers are small and of a pale Flesh Colour, or white with a faint Cast of red; they stand in small and not very compact Umbells, and each of them is succeeded by a Fruit composed of two Seeds, of the Shape already described, joined so closely together as to make one entire globular or spherical Body. It is remarkable, that tho' the Seed of this Plant is of so agreeable a Scent, the other Parts of it, if bruised, have the offensive Smell of the Bug when kill'd.

Coriander Seed, while green, has a very strong Smell, and is apt to affect the Head, but this goes off in the drying, into the fine light aromatic Smell we

perceive

perceive in it. Chemically analysed it yields a small Portion of a fine, thin, and fragrant essential Oil, and with it an acid Phlegm, and a small Quantity of an urinous Spirit.

The Virtues of Coriander Seeds have been much disputed among the Ancients; some have held them to be cold, narcotic, and stupefying, others declare them innocent and wholesome. *Matthiolus* tells us they should never be admitted either into Foods or Medicines, unless they have been first steeped for three Days in Vinegar; and *Tragus* tells the Druggists, that if they sell the Seeds without this Preparation, or some other equivalent one, they sell a Poison under the Name of a Remedy. If there be any Grounds for this heavy Charge against Coriander Seed, it appears however to be rather appropriated to it while green, than after it is become mild and aromatic by drying, and it appears from Experiment, that this simple Process is a better Corrective for it than all the Trouble of macerating it in Vinegar.

We find it in constant Use among our Confectioners, and in many Kinds of Food, and never hear of its being attended with any bad Effects. It is indeed a good Carminative and Stomachic, and is found to do great Service in Pains of the Head arising from Crudities of the Stomach. It has some Degree of Astringency with its other Qualities, and is recommended by many in Hæmorrhages and Diarrhœas. It has been made an Ingredient in many of the Compositions of the Shops, particularly in the Lenitive Electuary, and others of that Intention.

CHAPTER V.

SEMEN FOENICULI, *Fennel Seed.*

WE have two Kinds of Fennel Seed in Use in the Shops very different from each other, both in their Shape and Qualities; the one is distinguish'd by the Name of the common Fennel Seed, the other by that of the sweet Fennel Seed.

The *Semen Fœniculi communis*, or common Fennel Seed, is a small and oblong Seed, of a deep dusky brown Colour; with some Admixture of a dirty greenish in it, and somewhat approaching toward Blackness. It is of an oblong Form and slender, rounded and gibbous on one Side, and flatted on the other, and terminates in a Point at each End; its rounded Side is deeply striated with longitudinal Furrows, its flat Side is smooth: it is considerably heavy, not very easily broken, but when bruised is of an unctuous Nature; it is of a sharp, biting and pungent Taste, but with not much of the aromatic in it. Fennel Seed is to be chosen new, sound, heavy, of a good Colour and sharp Taste; we have it from *Germany* and *Holland*, where it is cultivated in Abundance for this Purpose.

The Plant which produces this is our common Fennel. It is of the same Class with the following according to the botanical Writers, and is too frequent in our Gardens to need a Description. Its Stature, its dusky green Colour, and the fine Division of its Leaves are sufficient to distinguish it from all the others of the Class.

The

520 MACEDONIAN PARSLEY SEED.

The *Fœniculum dulce*, or Sweet Fennel Seed, is a larger and more beautiful Seed; It is of an oblong Figure and pale Colour, seeming composed of a Mixture of a pale brown, a dusky green and white; it is rounded on one Side and flat on the other. Its rounded Side is deeply striated, and its flat one smooth; it is of a tolerably firm Texture, tho' less so than the common Fennel Seed, and when bruised is less damp and unctuous. It is of a very fragrant and agreeable Smell, and of a pleasant aromatic sweetish Taste, with nothing of the Pungency of the common Fennel Seed. It is to be chosen new, large, and fair, it is subject to be Worm-eaten, and when damp or dusty is to be rejected. We have it from *Holland*, but it is cultivated in great Abundance in many Parts of *France* and *Italy*.

The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. It is taller than the common Fennel, and its Stalks as well as Leaves are of a paler green; it is described by Authors under the Name of *Fœniculum dulce*, and *Fœniculum majore & albido semine*, but it is scarce certain that it is a distinct Species from the common Kind; for in the colder Countries, if raised from Seed successively for several Years, it becomes more and more like the common Fennel. They who cultivate it for Use are very sensible of this, and always raise their Crop from Seed brought from warmer Parts of the World, not from any of their own raising.

Fennel Seed, on a chemical Analysis, yields a large Quantity of an essential Oil, partly thin and Fluid, partly thick like Butter; and with this something of an urinous Spirit, with some Mixture of an acid Salt in it. It is a Carminative and Attenuant, it thins the Blood and Juices, and is considerably diuretic and sudorific: Fennel Root is frequently used in Decoctions, intended for promoting the urinary Discharges, and answers this Purpose as well as the Seed, tho' it wants its carminative Virtue. There are Authors who recommend sweet Fennel Seed as a Specific in the Small Pox and Measles, and others are very full of its Praises in malignant Fevers. *S. Pauli* recommends a Decoction of the Roots and Seeds in these Cases, as a Remedy superior to almost all others. The Roots are of the Number of what are called the five opening ones of the Shops, and *Etmuller* gives them the Character of very great Antinephritics; and the Juice of them is recommended four Ounces for a Dose against Quartan Agues. We principally esteem the Seed now as a Carminative, and find it of great Use as such. There is an Oil drawn from it in the common Way by the Alembic, four or five Drops of which is a Dose, and which is equal to that of Anise Seed in Virtue and much more pleasant; and its distill'd Water is given with Success to Children for the Gripes.

It is an Ingredient in many of the officinal Compositions, and in the Decoctions for Clysters.

CHAPTER VI.

SEMEN PETROSELINI MACEDONICI, *Macedonian Parsley Seed.*

THE *Semen Petroselini Macedonici* is a small and oblong Seed, it is smaller than the Carraway Seed, otherwise it somewhat resembles it in Shape. It

it is thickest in the middle, and goes off to a Point at both Ends: it is of a dark olive Colour approaching to that of the common Fennel Seed, and is rounded and prominent on one Side, and flatted or depressed on the other. Its flat Side is smooth, the other is furrow'd with deep *Striæ* running longitudinally. It is very heavy, of a firm Texture, not so easily bruised as many other Seeds, and when it is, it becomes very damp and unctuous. It is of a slightly aromatic Smell when bruised, and of a somewhat acrid and pungent Taste. It is to be chosen new, fresh and firm, of a good Colour, and not dusty or light. Our Druggists are apt to sell other Seeds in its Place, but its remarkable Slendernefs and dark Colour distinguish it sufficiently from the common Counterfeits. The true *Macedonian* Parsley Seed is brought to us from the *Levant*.

The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and one of the *Herbæ umbelliferae* of Mr. Ray. It is described in the botanical Writers under the Name of *Apium Macedonicum*, and *Petroselinum Macedonicum verum*. It grows to two Feet or a little more in Height; its Leaves much resemble those of the common Parsley; but that they are much notch'd at the Edges and somewhat hairy. The Flowers are small and whitish, they stand in lax Umbells, and are succeeded each by two of the Seeds above described. The Plant is common in the warm Countries, but will not bear the cold of our Climate.

Macedonian Parsley Seed, on a chemical Analysis, is found to contain a very large Quantity of a thin essential Oil, and a small Portion of an acrid Salt, with somewhat more of an urinous one. The Oil separated by Distillation in the common Way by the Alembic, is a good Carminative; and the Seed itself in Powder or Decoction has the same Virtues in no small Degree. We seldom use it in extemporaneous Practice, but it is or ought to be kept in the Shops as an Ingredient in the *Theriaca* and some other of the capital Medicines.

CHAPTER VII.

SEMEN ANETHI,
Dill Seed.

THE *Semen Anethi* is a small Seed about a twelfth of an Inch in Length, and about two Thirds of that Measure in Breadth; it is of an oblong or oval Figure, and is remarkable for having a membranaceous Edge or Margin, running all round it in the Manner of that of the Sefeli's. Its Surface is prominent and rounded on one Side, depressed and flatted on the other, and is marked with three high Ribs which run its whole Length; it is of a pale but somewhat dusky yellowish Colour; it is moderately heavy, not very hard, and when beaten in a Mortar becomes very damp and unctuous. It is of a very strong but not disagreeable Smell, and of an acrid, pungent, and an agreeable Taste. It is to be chosen new, full, plump, and heavy, of a good Colour and strong Smell; such as is foul and dusty is to be rejected.

The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Ray. It is described by all the botanical Writers under the Names of *Anethum*, *Anethum vulgare*, and *Anethum hortense*. Its

Root is long and slender ; its Stalk strong and two Feet or more in Height ; its Leaves are finely divided like those of Fennel, but smaller and of a bluer green. Its Flowers stand in pretty compact Umbels on the Tops of the several Branches, and are small and whitish ; they are succeeded each by two Seeds growing close together by their flat Sides.

Dill Seeds, chemically analysed, afford an acid and an urinous Salt dissolved in Phlegm, and a moderate Portion of an Oil partly thin and fluid, partly thick like Butter ; they are accounted attenuant and diuretic, and are very good Carminatives. It is given with Success in Flatulencies, Hiccoughs, Cholics, and other Complaints of the same Origin ; it promotes the Menfes, and is by many celebrated as an Anodyne and Narcotic. It is given in Powder from five Grains to fifteen, and in Infusion ; but it is at present rather a Medicine among the Ladies than in the Shops ; where, unless it were an Ingredient in some of the old Compositions, it would not be known, for the present Practice takes no Notice of it.

CHAPTER VIII.

SEMEN AMMEOS,
Bishopsweed Seed.

THE *Semen Ammeos* is a small Seed of an oblong Figure, broadest in the Middle, and smaller at each End ; they are however somewhat larger, and more obtuse at the Base than at the Point or upper End ; they are rounded or prominent on one Side, and flat or depressed on the other, and are striated pretty deeply with small longitudinal Furrows. In Colour they are of a dusky brown with some faint Admixture of a purplish in it ; they are moderately heavy, but not very hard ; they are easily broken in a Mortar, and when pounded they become damp and unctuous, and are of an agreeable aromatic Smell ; they are of an acrid, pungent and somewhat bitterish Taste, and both in Taste and Smell they somewhat resemble *Origanum*. They are to be chosen small, dark coloured, and sound, not foul and dusty, and such as when bruised smell very strongly.

The Plant which produces them is one of the *Pentandria Digynia* of *Linnaeus*, and one of the *Herbæ umbelliferae* of Mr. Ray. Authors have described it under the Name of *Ammi verum*, *Ammi Creticum*, and *Ammi odore Origani*. Its Root is small and fibrous ; its Stalk round and hollow ; its Leaves divided into long and narrow Segments, and those notched at their Edges. It grows to about two Feet in Height, and has large Clusters of Flowers in Form of Umbels at the Tops of the several Branches ; they are small and white, and are succeeded each by two of the Seeds here described, which are joined together by their flat Part. This is the Description of the Plant which produces the true *Semen Ammeos*, but we frequently meet with the Seed of another Species of *Ammi* in the Shops under the Name of the true. This Seed is easily distinguished from the other by its being somewhat larger, of a greyer Colour and less aromatic, and particularly by its wanting that Smell of *Origanum*, which so peculiarly characterises the true *Cretic* Kind. The Plant which produces this is the common Bishopsweed described by Authors under

der the Name of *Ammi latifolium*, *Ammi majus*, and *Ammi Semine minus odorato*. It is a taller Plant than the other, and has broader and less indented Leaves. The Seed of this Plant possesses much the same Virtues with those of the other, but in a more remiss Degree. The true *Cretic Ammi* is one of the four lesser hot Seeds of the Shops, and is an Attenuant, Aperient, and Carminative. It is prescribed in Flatulencies and Cholics, and against Obstructions of the Menfes, and is said also to be a Lithontriptic. The present Practice however pays little Regard to it, and if it were not an Ingredient in some of the old Compositions, its Name would be lost in the Shops. As it is, we rarely see it genuine, and among the various Counterfeits of it, there are not wanting some, who sell the common Parsley Seed in its Place.

C H A P T E R IX.

APII SEMEN,
Smallage Seed.

THE *Semen Apii* is a very small Seed of an oblong Figure; it is largest in the middle, and terminates in a Sort of Point at each End. It is rounded or prominent on one Side, and flatted or depressed on the other, and is striated longitudinally, or marked with high Ridges, that continue their Course from the Base of the Seed to its Point. It is of a dusky greyish brown Colour, considerably heavy, and not easily broken in a Mortar; but when bruised it becomes damp and unctuous. It has but little Smell, but it is of an acrid and aromatic Taste with some Mixture of Bitterness.

It is one of the smallest Seeds kept in the Shops; it is to be chosen clean and pure, not dusty, which generally happens to it when it begins to decay, and of an acrid Taste. The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and one of the *Herbæ umbelliferae* of Mr. Ray. It is described by all the botanical Writers under the Name of *Apium vulgare*, *Apium Palustre*, and *Eleoselinum*. Its Root is large and thick, white, and often divided into several large Pieces, and is of an aromatic, but strong and somewhat disagreeable Smell, and of a bitterish and acrid Taste. Its Stalks rise to two or three Feet high; they are hollow, striated, and jointed; its Leaves are large, and of a shining green, and are not deeply divided, but rather parted into a few large Segments, and those notched at the Edges. The Flowers grow in Umbells at the Tops and at the Joints of the Stalks; they are small and whitish, and are succeeded each by two of the small Seeds before described, joined together by their flat Part, and forming a Kind of oblong and rounded Fruit; it is very common in *England*, and in almost all other Parts of *Europe*; it grows in wet Places. Its Seed is not the only Part of it celebrated in Medicine; for the Root is of the Number of the five opening Roots, and is kept in some of the old Compositions; but it is always expected to be used fresh or green, so that it does not properly come into the Care of the Druggist, but is sold by the Herb Sellers.

The *Semen Apii*, distilled by the Retort, yields a very large Quantity of an essential Oil, and of a Phlegm of a reddish Colour, containing a Mixture of an acid and an urinous Salt. It is diuretic and sudorific; it attenuates gross Humours

Humours and promotes the Menfes; it is also carminative, and is given in Cholics and Flatulencies with Success. It is suspected however of some bad Qualities; *John Bauhine* is of Opinion, that it is highly improper for People subject to Convulsions, and our Mr. *Boyle* declares that it is bad for the Eyes. The common Smallage which produces this Seed, when cultivated, properly becomes the favourite Herb we call after the *Italians* Celery.

CHAPTER X.

SEMINA SESELEOS,
Seseli Seed.

WE have two Kinds of Seseli or Hartwort Seeds in Use in the Shops, the Produce of two different Plants growing in very distant Parts of the World, and distinguished thence under the different Names of *Seseli Creticum*, and *Seseli Massiliense*, Hartwort of *Candy*, and Hartwort of *Marseilles*. The *Seseli Creticum* is a large Seed of a very singular Figure and Structure; it is of an oblong Form, thickest in the Middle, and smaller toward each End, where it terminates both Ways in an obtuse Point. It is prominent on one Side, and flattened or depressed on the other, and is marked with three or four prominent Ribs or Ridges running its whole Length. Beside these it has on each Side a thin Membrane somewhat curled and granulated running its whole Length; it is of a brownish Colour, with some Admixture of a faint yellowish in it, and is light and not very hard; when broken it is of a somewhat aromatic agreeable Smell, and of a very strong and acrid Taste. It is to be chosen long, large and full grown, with the lateral Membranes entire, and not dusty or eaten by Insects. The Membranes are often the first Part of it that decay, and therefore their being entire is a good Sign of its being new.

The Plant which produces this Seed is one of the *Pentandria Digynia* of *Linnaeus*, and one of the *Herbæ umbelliferae* of Mr. *Ray*. It is described by *Caspar Bauhine* under the Name of *Seceli Creticum minus*, and by *John Bauhine* under that of *Caucalis Minor pulchro Semine*, and by many under that of *Tordylium Creticum*. Its Root is long and thick, its Leaves are broad, and resemble those of the common Parsnep. Its Stalks are round, hollow, and jointed, its Flowers small and white, disposed in loose Umbels at the Tops of the Stalks, and each of these is succeeded by two of the Seeds already described. It is a Native of the *East* that is kept in some of our Gardens.

The *Seseli Massiliense* is a Seed resembling the other or *Cretic* Kind, in the Singularity of having a foliaceous Edge round it, but differing in many other Particulars. It is shorter and thicker, though of the same oblong Figure, largest in the Middle, and smaller toward each End; it is rounded on one Side, and flattened on the other, and is very deeply ridged on the Back in a longitudinal Direction. It is of a dusky olive Colour or dark brown, with a considerable Admixture of greenish in it, and has a very fair membranaceous Edge running all round it; it is considerably heavy, and tolerably hard and firm, and when bruised in a Mortar becomes fatty and damp; it is of a somewhat aromatic Smell, and of a bitterish, acrid and disagreeable Taste. It is to be chosen fresh, plump, greenish and hairy.

The Plant which produces this is of the same Class with that from which we have the former : It is described by Authors under the Name of *Seseli massilium visagæ folio*, and *Seseli massilioticum ferulæ folio*. It is a taller Plant than the *Cretic Seseli*, its Root is long and white, its Stalks hollow and jointed and very much branched, and its Leaves very like those of some of the *Ferulæ* or Fennel Giants, large, rigid, and divided into very fine Segments: The Flowers are white and small, but stand in large loose Umbells, and each is succeeded by two of the Seeds already described, with the flat Sides placed together.

Both the Kinds of Seseli Seed have the same general Virtues, but the *Cretic* possesses them in a much greater Degree. They are both attenuant and diuretic; they are greatly recommended by some in Obstructions of the Menses, and are by others said to be Lithontriptics, but this is a Virtue that seems no more to belong to them than to all other Diuretics.

CHAPTER XI.

SEMEN THLASPEOS, *Tblaspi Seed.*

THE *Semen Tblaspeos* is a small Seed, of an oblong Figure and smooth Surface; it is thickest in the Middle and smaller towards the Ends, and is somewhat compress'd: Its Colour, when fresh gather'd, is a yellowish or orange, but it grows more and more reddish in keeping, and in fine becomes dark and blackish. It is very light and not over hard, easily bruised in a Mortar, and grows a little damp and unctuous in the doing that. It is of no remarkable Smell, but of a very sharp and acrid Taste. It is to be chosen new, fresh, and of a yellowish Colour; as it loses this Colour it loses also by Degrees its acrid Taste and Virtue. Care is to be taken that the Seeds of the common Garden Cress are not impos'd upon the Buyer in its Place.

The Plant which produces it is one of the *Tetradynamia Siliculosa* of *Linnaeus*, and one of the *Herbæ tetrapetalæ siliculosæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Tblaspi Dioscoridis*, *Tblaspi Drabæ folio*, and *Tblaspi arvense siliquis latis*. It is a small Plant, seldom exceeding six or eight Inches in height; its Root is small and slender, its Stalk hard and woody, its Leaves oblong, and somewhat broad and indented at the Edges. Its Flowers grow in a sort of loose Spike at the Tops of the Branches, and are small and white; these are succeeded each by a short and broad membranaceous Capsule, in which are contained many of these Seeds. It is a very common Plant in the Corn Fields, in some Parts of *England*, and is easily raised in Gardens from the Seed; but it is even, when cultivated, a very difficult Plant to collect the Seeds in any Quantity from, for they ripen severally in the Capsules; and by that Time a second Capsule of them is ripe, those of the first are often fallen and lost.

It is celebrated for many Virtues, and call'd one of the best Attenuants and Diuretics known; but if it were not kept as an Ingredient in some of the old Compositions, we should hardly find it in the Shops, for the present Practice takes no Notice of it.

C H A P T E R XII.

SEMINA SINAP EOS,
Mustard Seed.

TH E Seeds of the common Mustard are small, round, of a dusky reddish brown on the outside, and yellowish within; very easily bruised, and of a sharp, acrid and biting Taste. The Plant which produces them is one of the *Tetradynamia Siliquosa* of *Linnaeus*, and one of the *Herbæ tetrapetalo flore siliquosæ* of *Ray*. It is the *Sinapi sativum* of *Gerard*, the *Sinapi rapi folio* of *C. Baubine*, and the *Sinapi siliqua latiuscula glabra semine ruffo sive vulgare* of *J. Baubine*. It grows to about two Feet in Height; its Stalks are round, succulent, tender, and somewhat hairy; they are of a pale or yellowish green Colour, and are branched toward the Top. The Leaves are very rough to the Touch, and of an acrid and biting Taste like that of the Seed; they stand alternately on the Stalks, and are considerably large, of an unpleasant green Colour, and deeply notched and jagged at the Edges. The Flowers stand on the Tops of the Branches, they are yellow, small, and composed of four Petals; as soon as they are fallen, there appear oblong and slender Pods, in which the Seed ripens, and the whole Plant after that withers.

The Seed of this Plant, a little bruised, if held to the Nose occasions sneezing, and if near the Eyes it makes them water. Chemically analysed it yields, first by Distillation in a Retort in a Sand-heat, a yellow and unctuous Liquor, transparent, and of a sharp acrid Taste; after this there rises a yellow, clear and limpid Liquor, and with it a small Quantity of Oil; after this there comes over a copious black and thick Oil, and a volatile Salt in a dry and solid Form concretes in Grains to the Sides of the Receiver, in the same manner as the volatile Salt of Hartshorn does in the Distillation of that Substance. The Remainder, in the Retort, is a light black Coal. If the second Spirit be distill'd again, and divested of its Oil, it becomes clear and very pungent, and much resembles Spirit of Hartshorn; the Coal remaining behind, calcin'd and lixiviated, yields scarce any fix'd Salt; but it is said, that urg'd by a very strong Fire in a coated Retort, it will at length yield a true Phosphorus, in all Respects resembling that of Urine. Most of the acrid Plants afford a volatile Salt, which has been by some supposed to be peculiarly an animal Product: There are some of the less pungent ones also that afford it, as is seen by the Analyses of the medicinal Plants, given in their Places; but it is always observed, that the pungent and acrid ones yield the much greatest Quantity of it.

Mustard Seed is attenuant and resolvent in a very high Degree, it warms the Stomach and excites an Appetite, but its principal medicinal Use is external in Sinapisms, Applications made to certain Parts when Irritation is intended, but not blistering. It is usually mix'd with Horseradish Root and other Ingredients of the same Kind for this Purpose.

CHAPTER XIII.

SEMEN LINI,
Lin Seed.

LIN SEED is a small flat Seed, of an oblong or oval Figure, broad and obtuse, or rounded at one End, and terminating in a Point at the other: It is of a bright brown Colour with some faint Cast of Reddishness in it; it is very bright and glossy, its Surface perfectly smooth, and is considerably firm and hard. It is very heavy, and when bruised in a Mortar becomes fattish, moist and unctuous. It has scarce any Smell, and not much Taste, but it becomes unctuous and very mucilaginous on being held a little Time in the Mouth. Lin Seed is to be chosen fresh, full, and sweet; not dusty or rancid, and such as is not easily broken in a Mortar. We have it from our own Fields, where the Plant which produces it is cultivated for other Purposes, beside this occasional one of producing a Seed for the Service of Medicine.

The Plant is one of the *Pentandria Pentagynia* of *Linnaeus*, and one of the *Herbæ pentapetalæ vasculiferae* of Mr. Ray. It is described by all the botanical Writers under the Name of *Linum vulgare*, and *Linum Sativum*. Its Root is small and has several Fibres; its Stalk rises to be two Feet or more in Height, and is slender, hollow, and when broken lengthwise is found to consist of a multitude of fine and tough Filaments. Its Leaves are oblong and narrow, and stand irregularly on the Stalks. Its Flowers grow at the Top of the Branches, and are large and of a very beautiful blue Colour; they soon fade, and are succeeded by Capsules of a roundish but pointed Figure, divided into several Cells, in each of which is a Series of these Seeds. Lin Seed, distill'd in a Retort, yields first a small Quantity of a limpid Phlegm, of a very slightly saline Taste: After this comes about an equal Quantity of a Liquor still colourless, but of a subacid Taste; then an austere and more acid Liquor, and after this a Quantity equal to all the rest, of a reddish, empyreumatic, and urinous Liquor, of an austere and subacid Taste; and finally a fine limpid Oil, in about the Proportion of a fourth Part of the Seeds used, or a little more than that. The Remainder in the Retort, calcin'd and lixiviated, yields a very inconsiderable Quantity of a fix'd Salt, about twelve or fourteen Grains to the Pound, this is of a foliated Structure, and is very little alkaline, rather a *Sal Salsus*.

Lin Seed bruised and steep'd in Water gives it very soon a thick mucilaginous Nature, and communicates much of its emollient Virtues to it. It is anodyne, attemperating, and of great Service in Suppressions of Urine, from Inflammation and Heat; it envelops the acrid Salts of the Urine, and prevents their vellicating and wounding the tender Parts, and in some Degree supplies the Mucus of the Bladder when abraded and worn off. It is to be given in Decoction or Infusion on these Occasions, and the Infusion is not to be made too thick or mucilaginous, for in that Case it loads the Stomach, and breeds Flatulences in the Intestines. The Poor in some Countries have, in Times of Scarcity, been reduced to live upon Lin Seed by way of Bread, but it has been found to swell them up, and render them very unhealthful. A slight Infusion of Lin Seed, by way

way of Tea, is recommended by many as an excellent Pectoral, and the Seed is a common and a very good Ingredient in Clysters. Externally Lin Seed ground to Powder is a noble Emollient, as is also the strong Mucilage, made by boiling the Seeds a long Time.

The Oil drawn from these Seeds by Expression, is of excellent Service in Coughs, Plurifies, and many other Cases; it opens the Bowels, promotes Expectoration, and either taken by the Mouth, or given in Glysters, is a noble Remedy for Pains in the Bowels, and even in the *Passio Iliaca*. Great Care is to be taken to have this Oil genuine, and properly prepared; it ought to be fresh drawn for medicinal Purposes, and that without the Assistance of Heat. It is in this Case of a very good Taste and Smell, but if Heat has been used in the Expression, or if it have been kept too long, it grows intolerably rank and offensive, and is apt to nauseate the Stomach: In this Case, if better cannot be had, a great Part of the ill Flavour may be taken off by shaking it thoroughly, several times over, in a large Bottle, with fresh Quantities of warm Water.

Lin Seed is an Ingredient in many of the Ointments and Plaisters of the old Dispensatories, and is in frequent Use in Cataplasms and Fomentations.

C H A P T E R XIV.

SEMEN SANTONICUM, *Worm Seed.*

THE *Semen Santonicum* is a light and chaffy Seed, envelop'd with a vast many thin Membranes, which have the same Virtue with the Seed itself, and are used with it and under its Name: It is a small and light Seed, of a pale yellowish brown Colour, with some Admixture of greenish in it, of an oblong Form, and somewhat larger at the Base, and tapering to a Point at the Summit. It is of a friable Texture, easily beat to Powder, not fatty or unctuous as many Seeds are in this State, but dry and chaffy: It has not much Smell, but is of a bitter though not very disagreeable Taste. Worm Seed is to be chosen large, fresh, and clean, not dusty or decay'd, or hanging together in Clusters, which is a Sign of Insects being or having been among it. We have it from the *Levant*, where it is produced in great Plenty, without the Trouble of sowing the Plant, which is abundant in their Fields wild.

It is one of the *Syngenesia polygamia superflua* of *Linnaeus*, and one of the *Herbæ corymbiferae flore non radiato* of Mr. Ray. It is a Species of Wormwood, and grows to the Height of two or three Feet; its Stalks are round and whitish, and very tough; its Leaves of a pale greyish Colour, finely divided, and somewhat resembling those of our common Sea Wormwood, sold in the Shops under the Name of *Roman Wormwood*. The upper Part of the Stalks have Flowers in long Spikes, and these are succeeded by the Seeds already described.

Worm Seed, distill'd dry in a Retort, yields a limpid Liquor, and afterwards a reddish one, manifesting an acid and an alkaline urinous Salt in it; after these comes an Oil of a reddish Colour and empyreumatic Smell, immoderately bitter to the Taste. Its great Virtue is that of destroying Worms in Children; to this Purpose it may be given in any Form; it is too bitter indeed to be
well

well swallow'd either in Powder or Decoction, but is best taken by way of Comfit cover'd over with Sugar. Our common People have a coarser Way of giving it mix'd whole in Molasses or Treacle, and find good Effect from it; but our Druggists have almost brought it out of Credit, by selling the Seeds of the common *Abrotanum* in its Place.

CHAPTER XV.

SEMEN FÆNUGRÆCI,
Fænugreek Seed.

THE *Semen Fænugræci* is a Seed of a very singular Figure, it is about the Size of the Hemp Seed, but of an irregularly rhomboidal Shape, considerably thick, and having a Line or Depression running obliquely from one of the opposite Angles to the other. It is of a pale yellowish Colour, of a wrinkled Surface, considerably heavy, and of an extremely tough and firm Texture; very difficultly broke in a Mortar, but when bruised very damp and glutinous. It is of a very strong and disagreeable Smell, and of a faint nauseous Taste. We have it from *Germany*, where, as also in many other Parts of *Europe*, it is cultivated in Fields in great abundance.

The Plant which produces it is one of the *Diadelphia Decandria* of *Linnaeus*, and one of the *Herbæ flore papilionaceo leguminosæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Fænumgræcum*, and *Fænumgræcum sativum*. Its Root is long, slender, and woody; its Stalk ten or twelve Inches high, round, green, and divided into a number of Branches: The Leaves grow three at a Joint, in the manner of those of the common Meadow Trefoil, which they much resemble, but that they are smaller and more notched at the Edges; they are green on the upper Side, but greyish or whitish underneath: The Flowers grow from the *Axæ* of the Leaves, and are white, in Shape resembling those of Pease: The Pods which succeed these are very long and slender, somewhat flattened, and terminate in a long empty Point; the other Part of the Pod contains the Seeds above described, several being lodged in a Row in each Pod.

Fænugreek Seed, distill'd in a Retort, yields a moderate Quantity of a limpid Phlegm, smelling and tasting very strongly of the Seed, and containing a small Quantity, both of an acid and of an urinous Salt; after this about an equal Quantity of a reddish empyreumatic Liquor, discovering a larger Portion of both Kinds of Salt in its Taste; after this a moderate Quantity of a reddish Liquor, containing a volatile urinous Alkali alone, and that in considerable Quantity; and about twelve Grains from the Pound of a dry concreted Salt of this Kind, with a fifth Part of the Weight of the Seeds of an essential and empyreumatic Oil; finally, the Matter remaining in the Retort, calcin'd and lixiviated, yields a moderate Portion of an alkaline Salt. Boil'd in Water they give it a mucilaginous Texture, and that in a very great Degree, a small Quantity communicating a gelatinous Thickness to a large Admixture of that Fluid. Fænugreek is used externally on many Occasions, it is emollient and discutient in a great Degree, and is found to give great Relief in Pains, used by way of Cataplasm, or of Fomentation: It is sometimes also made an Ingredient

in emollient Clysters, where Anodynes and Carminatives are required, without too much Pungency. It very happily blunts the Acrimony of the Humors, and in Dysenteries and Diarrhœas, where the Sharpness of the Stools have eroded the mucous Matter off the Intestines, the Mucilage of this Seed given in this manner excellently supplies it for a Time.

It is not used internally, but is an Ingredient in the Ointment of Marshmallows, and some other of the officinal Compositions. A Decoction of it is recommended in Erysipelas's, and a Cataplasm, made of the bruised Seed with Bread and Milk, is one of the best Remedies in Bruises and Sugillations. Women who are subject to hysteric Complaints are sometimes peculiarly offended with this Seed and cannot bear it, either externally or clysterwise. Internally it is never given.

C H A P T E R XVI.

SEMEN CUCUMERIS,

Cucumber Seed.

THE *Semen Cucumeris* is a moderately large Seed, of an oblong Figure, compressed and largest in the Middle, terminating in a Point at each End. It is composed of a hard and tough membranaceous Covering, containing within it a white and sweet Pulp like that of an Almond. Cucumber Seed is light and easily broken in a Mortar; its Colour is white, and its Surface smooth and glossy; it has scarce any Smell, and a sweetish but almost insipid Taste. It is to be chosen new, full, and sweet; such as Tastes rancid, or has its pulpy Part wither'd and shrunk, is to be rejected. The Cucumber Seed we use in the Shops is the Produce of our own Gardens.

The Plant which produces it is the common Cucumber eaten at our Tables, which is of the Class of the *Monœcia Syngenesia* of *Linnaeus*, and one of the *Herbæ Pomiferæ* of Mr. Ray. The Cucumber Seed is one of the four greater cold Seeds of the Shops, it is an almost universal Ingredient in Emulsions, and is found of great Service in Fevers, and in nephritic Complaints. It is also an Ingredient in the Species *Diatragacanthi*, and some other Compositions of the same Intention in the old Dispensatories.

C H A P T E R XVII.

SEMEN CUCURBITÆ,

Gourd Seed.

THE *Semen Cucurbitæ* is a Seed of a very singular Figure; it is near an Inch in Length, and of about a quarter of an Inch in Breadth, flattened and thin, and has two Angles or Auricles, the one, which is that at which the Plant shoots out at when sown, is narrower, the other broader. The external Membrane of this Seed is thick and tough, and within it there is enclosed a soft and sweet white Pulp like that of an Almond. It is considerably heavy, and not easily broken, but when bruised thoroughly in a Mortar, its medullary Sub-
stance

stance becomes soft and unctuous, and readily mixes with Water, giving it a milky Colour and a pleasant cooling Taste.

Gourd Seeds are to be chosen large and plump, fresh, full of Pulp, and of a good Taste; they are subject to be injured by Insects, but this is discovered by their being lighter than they ought, and dusty. After long keeping their pulpy Matter will also acquire a yellowish Colour and rancid Taste; in either of these Cases the Seeds are no longer fit for Use.

We have our Gourd Seeds from *Holland*: The Fruit itself is esculent, and is cultivated as well on that Account, as for the Sake of the Seeds in many Parts of *Europe*. The Plant which produces the officinal Gourd Seed is one of the *Monæcia Syngenesia* of *Linnaeus*, and of the *Herbæ pomiferæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Cucurbita longa*, *Cucurbita omnium maxima*, *anguina*, and *Cucurbita oblonga Flore albo Folio molli*. Its Root is fibrous, and spreads a long Way under the Surface; the Stalks are angular, not very thick, but of a great Length, and so weak that they lie upon the Ground if they have not some Support. The Leaves are roundish, twelve or fifteen Inches broad, and covered with a soft woolly Down, they are a little indented on the Edges, and supported on long hollow Pedicles. The Flowers are large and white, and the Fruit grows to an immoderate Size, sometimes to three, four, five, or more Feet long, smaller at the Neck, and larger in the Middle or Belly Part. It is covered with a Rind of a tough Texture, green at first, but afterwards yellow; this covers an esculent fungous Pulp, of an insipid Taste, within which are the Seeds arranged in six Cells.

Gourd Seeds, distilled dry in a Retort, afford a small Portion of a colourless Phlegm, containing a small Quantity of essential Salt, a smaller Portion of a yellowish Phlegm, of an empyreumatic Smell, and at first of an acid, afterwards of an urinous Taste; after this a larger Quantity of a reddish Liquor impregnated with an urinous Salt alone, and a Quantity of a reddish Oil, not less than half the Weight of the whole Quantity of Seeds used. The Matter remaining in the Retort yields, by Lixiviation, a very small Portion of an alkaline Salt.

They abound so much in Oil indeed, that a very sweet and pleasant one may be drawn from them in considerable Quantity by Expression. They are esteemed cooling and diuretic; they are of the Number of the four greater cold Seeds, and are used in Emulsions, and in some of the Compositions of the Shops; they are good in Fevers, and in all Disorders arising from an Acrimony of the Blood or Humours. Emulsions of these, and the other cold Seeds, are anodyne, and are generally used to take off Stranguries occasioned by Blisters.

C H A P T E R XVIII.

SEMEN CITRULLI, *Citrul Seeds.*

THE *Semen Citrulli* is a Seed of a very singular Figure; it is considerably large, oblong, broad, and flatted, of a somewhat rhomboidal Shape, and of a smooth Surface. It consists of a tough and hard membranaceous Covering, which incloses a white, soft, and sweet pulpy Matter, like the white Part of an Almond. It is moderately heavy, and when bruised in

a Mortarr, its pulpy Part becomes soft and unctuous ; it has scarce any Smell, and is of an insipid, but cooling and agreeable Taste. Citrul Seeds are to be chosen of a yellowish or reddish Colour on the outside, and perfectly white within ; of a good Taste, not rancid ; and sound and firm, not friable or dusty.

The Plant which produces them is one of the *Monæcia Syngenesia* of *Linnaeus*, and of the *Herbæ pomiferæ* of Mr. Ray. The botanical Writers have all described it under the Names of *Citrullus*, *Cucumis Citrullus*, and *anguria Citrullus*. Its Roots are fibrous and very numerous, its Stalks are weak and lie upon the Ground unless supported ; its Leaves are hairy and large, and are deeply divided into many Segments. The Flowers are large and yellow, the Fruit large and rounded, and covered with a firm and tough Skin or Rind, of a dark greenish Colour, spotted with a paler green, or with white in large Blotches. Under this is a fungous pulpy Substance, somewhat like that of the Cucumber, esculent but insipid ; this is sometimes white, sometimes reddish ; and within this is the Seed lodged in a spongy Substance, which fills the middle Cavity of the Fruit.

The Seeds of the Citrul are of the same Qualities and Virtues with those of the Gourd ; they are of the Number of the four greater cold Seeds, and are used in Emulsions as cooling and diuretic. In some Places they are mixed with purging Medicines in order to correct their Acrimony, and prevent griping ; but this is a Quality not peculiar to them, but which they possess in common with the other cold Seeds. The Citrul Seed affords an Oil by Expression, which probably also has no other Virtues than those of the other cold Seeds, but it is in great Reputation for a Cosmetic, and is used in Pomatums, and many other Compositions used for this Purpose.

C H A P T E R XIX.

SEMEN MELONIS, *Melon Seed.*

THE *Semen Melonis* is an oblong flattish Seed, largest in the Middle, and tapering to a Point at each End ; it is of a white Colour, and is composed of a hard and firm Skin or Membrane, enclosing a pulpy Substance, white and sweet, and resembling that of the Almond, wrapped up in another fine thin Membrane within its external harder Coat. Melon Seed is moderately heavy, not easily broken, but when bruised in a Mortar it becomes soft, damp, and unctuous ; its Colour is white, and its Surface very smooth and equal. It is to be chosen new, plump, fresh, and white when broken, not dusty or rancid, nor with the *Nucleus* withered in the Shell. The Plant which produces it is of the same Class with the former, and is sufficiently known, being the common Melon so much valued at our Tables.

It is cooling and diuretic, and has the same Virtues with the other cold Seeds as they are called ; it is used with them in Emulsions, and in some of the Compositions prescribed in our old Dispensatories.

CHAPTER XX.

SEMEN CARTHAMI,
Carthamus Seed.

THE *Semen Carthami* is a large and remarkable Seed ; it is of an oblong Figure, considerably thick, and marked with four Ridges running longitudinally along it, and making it of a square Figure. Its Surface is smooth and even, its Colour whitish, and it consists of a thin, but somewhat firm Membrane or Cover, enclosing a white pulpy Matter like that of an Almond, of a sweet and agreeable Taste. It is considerably larger than the Seeds of the ordinary Thistles, but moderately heavy, and easily reduced by beating in a Mortar to a damp unctuous Paste. It has very little Smell, and what it has is rather like that of a bruised Almond than any thing else. It is to be chosen fresh, large, of a good Colour, moderately heavy, and not broken or dusty ; in long keeping the Kernel is apt to decay, and the Seed is then of no Value.

The Plant which produces it is one of the *Syngenesia Polygamia æqualis* of *Linnaeus*, and of the *Herbæ Flore composito Capitatae* of *Mr. Ray*. It is described by all the botanical Writers under the Name of *Carthamus* and *Cnicus Sativus*. Its Root is small and oblong ; its Stalks tolerably strong and firm, and its Leaves smooth and of a bright green ; its Flowers are of a Saffron Colour, and are formed into Heads prickly on the outside, in the Manner of those of the *Carduus Benedictus*. It is cultivated in Gardens in many Parts of *Europe*. The Flowers are used sometimes in Medicine under the Name of *Flores Carthami*, or bastard Saffron ; their principal Use however is in dying. The Seeds are emetic and cathartic, but they are at present very little in Use.

CHAPTER XXI.

SEMEN NAPI,
Navew Seed.

THE *Semen Napi* is a small Seed perfectly round in Shape, of a smooth Surface, somewhat glossy, and of a purplish black Colour. They are very light and easily crushed to Pieces, and have scarce any peculiar Smell, but they are of a very pungent, acrid and somewhat bitterish Taste. They are to be chosen fresh, sound, full, and free from Dust, which is always a Mark of their Decay. We have them from *Germany* and *Holland*, but it would be easy to propagate them at home, if the Demand for them were sufficient to make it worth while.

The Plant which produces them is one of the *Tetradynamia filiquosa* of *Linnaeus*, and one of the *Herbæ tetrapetalæ filiquosæ* of *Mr. Ray*. It is described by all the botanical Writers under the Name of *Napus Sativa* and *Bunias* or *Napus dulcis*. Its Roots are thick and long, fleshy, and of a pleasant but somewhat acrid Taste ; its Stalks are strong and firm, and grow three Feet or more high ; its Leaves are large, of a blueish green, and divided pretty deeply at the Edges. Its Flowers are yellow, and are succeeded by long Pods, each containing a
Number

Number of these Seeds. It is cultivated in Gardens in many Places for the Sake of its Root, which is esculent, and by some esteemed very delicate. It flowers in *June* and *July*. There is another Seed of this Name kept also sometimes in the Shops, which is much like the former but larger, and of a paler Colour. This is known by the Name of Rape Seed. This is the Seed of the Plant described by Authors under the Name of *Napus Sylvestris*, and *Bunias Sylvestris*. From this Seed is drawn the Oil used in great Quantity by the People in the Wool Trade, and on many other Occasions under the Name of Rape Oil. It has the Credit of being possessed of the same Virtues with the other. Both are esteemed attenuant, cordial, and sudorific, and are said to be good in malignant Fevers; we take no Notice of them however in extemporaneous Practice, nor would either be so much as known in the Shops, were not one of them an Ingredient in the *Venice Treacle*. The Name there stands simply *Napus*, and the Authors who have written on the Subject are much divided in Opinion, whether it is the *Napus Sativa*, or the *Napus Sylvestris* Seed, that is to be used on that Occasion. We find that *Dioscorides* mentions no such Plant as a wild *Napus*, and therefore suppose that the Ancients in general were acquainted only with the *Napus Sativa*; and therefore are of Opinion in general, that this was the Plant meant: And even the elder *Andromachus* prescribes the *Napus dulcis*, but the younger *Andromachus*, and some others, commend the Seed of the wild Navew as much better in Medicine than that of the *Sative* Kind. *Galen* differs from both those who prefer this, and those who think best of the other for the *Theriaca*, and recommends the Seed of another Plant of the same Genus different from both; that is the *Pseudo Bunias*, or *Napus Sylvestris Cretica* of Authors. But it is of no great Purpose to us which Way the Dispute turns, our Druggists generally supplying us with Turnep Seed in the Place of *Semen Napi*, and the Proportion it bears to the other Ingredients in the *Theriaca* being so little, that it is no great Matter, whether either or neither of them are used in it.

C H A P T E R XXII.

CANNABIS SEMEN,

Hemp Seed.

TH E *Semen Cannabis* is a Seed too well known to need much Description. It is moderately large, of a roundish Figure, but somewhat oblong, and a little compressed, of a fine glossy and smooth Surface, of a pale greyish Colour, and not very hard. It is composed of a thin Membrane, somewhat brittle, and containing within it a white pulpy Matter of an oleaginous Nature, and of a sweet agreeable Taste, of very little Smell when dry, but while growing on the Plant of a very remarkable one, which affects the Head. Hemp Seed is to be chosen fresh, sound, and heavy, not rancid or dusty, full of Kernel, and of a good Taste.

The Plant which produces it is one of the *Diacia Pentandria* of *Linnaeus*, and of the *Herbæ Flore apetalæ sive Stamineæ* of Mr. Ray. It is sufficiently known under the Name of the common Hemp, and is described by Authors under the Name of *Cannabis vulgaris*, and *Cannabis Sativa*, and as it is of the

Number of those Plants whose Flowers and Seeds, or more properly whose male and female Flowers grow on different Individuals; they have divided it into the two Kinds, the male and female, or the flowering and the feeding Hemp. These Plants tho' very different in Appearance at the Time of their flowering, both arise from the same Seed, and are alike in all other Respects. The Stalk is large and striated, and when broken is found to be composed of a Number of tough and fine Fibres; the Leaves are digitated or divided into many long Segments which are notched at the Edges; the Flowers are formed of *Stamina* with yellowish *Apices*, and the Seeds grow clustering about the upper Part of the Branches of the other Plants which produce none of these Flowers.

We have our Hemp Seed from those Plants which are cultivated in our Fields, in several Parts of *England*, for the Sake of their Stalks, which are what our Linens are made of. Hemp Seed is a very good Food for many Kinds of Birds; and in times of Distress Men have attempted to live upon it; but it has not succeeded well, occasioning violent and continued Disorders of the Head. It is said to be a good Medicine in Coughs, but its great Virtues are against the Jaundice; we have Accounts from Authors of Credit, of many People cured of that Disease, solely by the Use of an Emulsion of Hemp Seed. They are also good against Heat of Urine, and are recommended by some in Gonorrhœas. An Oil is procured from the Seeds by Expression, in a very considerable Quantity which serves for many of the common Purposes of Life, and is emollient and discutient. An Emulsion of Hemp Seed is said also to be of great Service in taking off the Marks of the Small-Pox, if used for a considerable Time, beginning with it as soon as the Disease is over; and a Decoction of them is commended by many in Inflammations of the *Uvula*.

C H A P T E R XXIII.

DAUCI SEMEN,
Daucus Seed.

THERE are two Kinds of *Daucus* Seeds kept in the Shops distinguished by the Names of *Daucus Creticus*, and *Daucus vulgaris*, the *Cretic* and the common *Daucus*. The *Daucus Creticus* or the *Cretic* Kind, is a small Seed of an oblong Figure, smaller than the Seed of the ordinary Carrot; somewhat broad and obtuse at the Base, swelling out larger yet in the Middle, and terminating at the Top in a narrow Point. It is rounded or prominent on one Side, and flat or plain on the other, and is striated with longitudinal Furrows; it is very hairy and of a pale Colour, light, and not very hard, of scarce any Smell, but of a very acrid and aromatic Taste. It is to be chosen fresh, sound, and large, not dusty, and of an acrid Taste. It is very apt to breed Insects, which must be carefully looked into, for when that is the Case, it has no Virtue.

We have it principally from *Germany*, though there is sometimes a large Quantity of it brought in from the *Levant*. The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. It is described by Authors under the Names of *Daucus Creticus Semine hirsuto*, *Daucus Fœniculi Foliis*, and *Myrrhis annua Semine striato villosa incana*. Its Root is long, and of the Thickness of a Man's Finger; its Stalk does not rise to
more

more than six or eight Inches high; its Leaves are finely divided like those of Fennel, and are usually white and hoary, though sometimes perfectly smooth, and of a deep shining green. The Flowers stand on the Tops of the main Stalk and branches in large Clusters or Umbels, and are small and white; they are succeeded each by two Seeds, such as are above described, which are joined together by their flat Part. The Plant grows wild not only in the Island of *Crete*, but in *Germany* on the Mountains, in very considerable Plenty, where the Peasants gather the Clusters of Seed for the Shops.

The *Daucus vulgaris*, or common wild Carrot Seed, is a Seed sufficiently different from that of the *Candy* or *Cretic* Kind in Figure. It is somewhat short and broad, of a very singular Appearance. It is largest in the Middle, and terminates obtusely at each End. Its Surface is striated or ridged, the Ridges running regularly in a longitudinal Direction. It is somewhat flat and thin, and very light; its Colour is a deep brown; but it looks at first Sight whitish, which is owing to a Multitude of whitish *Fibrillæ* that grow like Hairs all over its Surface; these are considerably long, and are not simple Filaments, but are divided and ramified. It is not very hard, and when broken appears of a lax spongy Texture. It has but little Smell, but what it has is fragrant and agreeable. Its Taste is like that of the *Cretic Daucus*, but much weaker and fainter. It is to be chosen new, large, and of a good Colour, of a pleasant Smell, and of as brisk a Taste as may be. It loses much of its Virtues in keeping, and is often met with dusty and broken, in which Case it is of no Value. We sometimes also see a smaller Kind of it among the Druggists, this wants both Taste and Smell, and is of a darker Colour, though it resembles it in Shape: This is in Reality the same Seed, but it has been gathered while unripe. Our Druggists are apt to sell this Seed under the Name of the *Candy* Kind; but the Difference between them is very obvious, this being vastly more remarkable in its Hairs, which are so many branched Filaments, and that being a longer and narrower Seed.

The Plant which produces this is of the same *Genus* with that which affords the former. It is described by Authors under the Names of *Daucus vulgaris*, *Daucus Sylvestris*, and *Pastinacha Sylvestris tenuifolia*. Its Root is long, slender, white, and of an acrid Taste; its Stalks are striated and branched. It grows to two Feet or more in Height. Its Leaves are finely divided, and its Flowers stand in large Umbels, which are at certain Periods hollowed so as to resemble the Cavity of a Bird's Nest. They are small and white, sometimes a little reddish, and are succeeded each by two of the before mentioned Seeds growing close together. The Seed is obtained from our own Country, the Plant being frequent in our Meadows and Pastures, and by Way Sides.

The Seeds of the *Cretic* and common *Daucus* have the same general Virtues; they both yield on Distillation a copious limpid essential Oil, and a reddish Liquor, containing evidently a urinous and an acid Salt; the Remainder, taken out of the Retort and calcined, affords, by Lixivation, a fixed alkali Salt, but that in very small Quantity; not more than a dozen Grains of it can be obtained from the Pound. They are very powerful Diuretics, and are beside this much celebrated by some as Carminatives and Uterines. They attenuate thick and viscid Humours, open Obstructions, and promote the Menfes. Many People have esteemed the Seed of the common *Daucus* a
Remedy

Remedy for the Stone, and *Helmont* tells us of a Person who was freed from that Complaint for many Years, by the sole Use of it; but it is going too far to give it any more Praise on this Head, than that of a Diuretic of the ordinary Kind. The *Cretic* Kind is one of the four lesser hot Seeds of the Shops, and enters into some officinal Compositions.

C H A P T E R XXIII.

R I C I N I,

The several Kinds of Ricinus.

WE have in the Shops at present, though but little used, no less than four distinct Fruits, or Seeds, under the Name of *Ricini* as their general Term, but sub-distinguish'd by several others. These are, 1. The *Granum Regium*, call'd also simply *Granum*, and by the old *Greeks* *Kiki*. 2. The *Faba Purgatrix*, or *Barbados* Nut as it is usually call'd. 3. The *Avellana purgatrix novi orbis*: And, 4. The *Grana Tiglia*. These are all of them of the same Nature and Qualities, though they differ in Degree of Power; and are all the Fruits of Plants of the *ricinus* or *ricinoides* Kind.

G R A N A R E G I A,

Purging Grains.

This is one of the *Ricini* distinguished by *Geoffroy* under the Name of *Nucula cathartica prima*. It is an oblong Seed, of a Figure approaching to oval, gibbous or prominent on one Side, and hollow'd on the other, and has a little Umbilicus directly on its Head or Summit. It consists of a thin, tender, and brittle Coat or Rind, which is variegated with darker and paler Spots and Blotches in a very elegant and beautiful manner, and is very smooth and glossy on the Surface; and under this of a firm and white Matter, resembling the Substance of an Almond naturally divided into two Parts, and of a flattish nauseous Taste with something sweetish in it, but with a very considerable Mixture of the Acrid with it. Three of these Seeds are in their natural State contain'd in one rough and echinated Capsule.

The *Grana Regia* were known to the old *Greek* Writers, they call'd them *Kiki* and *Croton*. The *Arabians* describe them under the Name of *Alchervo*, and in the Shops, beside their common Name of *Grana Regia*, they are call'd *Cherva major*, *Cataputia major*, and *Ricini Nuclei*.

The Plant which produces them is one of the *Monæcia Monadelphica* of *Linnaeus*, and of the *Herbæ flore imperfecto seu stamineo* of *Mr. Ray*. It is described by the botanical Writers under the Name of the *Ricinus vulgaris* and *Palma Christi*. *Piso* has it under the Name of the *Nambu Græca*, and in the *Hortus Malabaricus* it is described under the Name of *Avanacoe* or *Citavanacoi*. It grows to six, eight, or more Feet in Height; its Stalk is thick and firm but hollow, jointed and branch'd toward the Top; the Leaves are like those of the Fig-Tree, but larger and more deeply divided, and they stand upon longer Pedicles; the Flowers are of the stameneous Kind, and stand in long Spikes; the Fruit is of a trigonal Form, and rough Surface, it stands on a Pedicle of an Inch in Length, and contains three Seeds, which are the *Grana Regia*.

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This Species of the Ricinus is frequent in *Ægypt*, *Syria*, and many Parts of the *East-Indies*, and is raised in our own Gardens. The Seeds formerly used in the Shops were brought from *Syria*, but at present we see few of them there.

The Kernels of this Fruit abound with a sweet, mild, and pleasant, as well as wholesome Oil, but there is beside this, a small Quantity of a hot, firey, and caustic Oil contained in them, which perfectly burns the Tongue and Lips on tasting it, and which is what their purging Virtue consists in. *Dioscorides* prescribes the Kernels of these Seeds, thirty for a Dose, which he says will vomit and purge, and that very strongly; but *Matthiolus* very reasonably suspects that there is some Error in the Copies in this Case, and that the true Reading should be three Grains of them instead of thirty. The *Arabians* never gave more than five or six of them at a Dose, and they talk of their operating very violently; and when they sometimes talk of Doses of fifteen of them, which is but half *Dioscorides*'s number, as the Text stands, they record such Effects as no one wou'd wish to see a Patient exposed to.

They gave them in Rheumatisms and Dropfies, and on all Occasions in which strong Purging was judged necessary. The *Brasilians* take the Kernels on many Occasions, but they are afraid of them in large Doses. They have been sometimes used with us, but they have always been found to operate violently, and to inflame the Fauces; and we have frequent Instances of People who have died by taking but very small Doses. The Antients attempted to abate its Acrimony by toasting it; and the *Indians*, according to *Piso*, sometimes make a Tincture of it, which is found to operate less violently than the Seed in Substance; but we are not in such want of safe and yet efficacious Cathartics, that we should be under any Necessity of having Recourse to these.

The Ancients obtained an Oil by Expression, and also by boiling from these Seeds, they call'd it *Oleum Cicinum*, they used it for burning in their Lamps, and in some of their Ointments and Plaisters; and the *Brasilians* at this Time use it externally, as a Liniment in Pains, and in cutaneous Foulnesses; and apply it to the Belly as a Cure for the Cholic, and as a Remedy against Worms in Children. *Dioscorides* commends it internally against Worms, and *Piso* tells us, that it is sometimes used in the same manner in the *Brasils*, and that with Success; three or four Drops of it are a Dose. We have an Account from Dr. *Stubbes* in our *Philosophical Transactions*, that the Oil of these Seeds is not purging, and may be given in large Doses, as a Spoonful or more. It would be necessary to determine by Experiment, between two such different Accounts, before any thing is ventur'd on as to the Use of the Oil. It is generally call'd a very rough Cathartic in the few Drops allotted for a Dose, but this Dr. *Stubbes* says, that even in the large Doses he allows it in, is no Purge at all. It would be well to be assured, that there is no Mistake as to the Oil in the latter Case.

FABA PURGATRIX,
The purging Bean.

This Fruit, though very generally call'd by the Name of the Purging Bean in the Shops, is very improperly call'd so, it being truly of the Ricinus Kind. We sometimes call it in *English* the Purging Nut of *Barbados*, but that is as foreign a Name from its true Nature as the other. It is a Seed of the Bigness of

of a Horse-Bean, of an oval or oblong Figure, convex and prominent on one Side, and depress'd on the other. Its Colour is a deep grey, sometimes an absolute black, and it consists of a thin but hard Coat, which contains a white *Nucleus* or Kernel, of an oily, nauseous, and very acrid Taste.

This Species of the *Ricinus* has not been known nearly so long in Medicine as the other. It is call'd sometimes *Cureos*, and sometimes *Nux Barbados* in the Shops. The Plant which produces it is of the *Ricinoides* Kind, and is described by the botanical Writers under the Names of *Ricinoides Americana gossypii folio*, *Ricinus Americanus major semine nigro*, and under that of *Mundy guacu*, its *Brasilian* Name, by *Piso*. It grows to the Stature of a moderate Tree, but its woody Part is soft and spongy, and when wounded exsudates a white milky Juice: The Branches are very numerous and much crowded with Leaves, which are of a shining green, and much resemble those of the Cotton Shrub: The Flowers are small and greenish, and they stand in large Clusters of an umbelliferous Form; these are succeeded by Fruits of a turbinated Shape, pointed at each End, and of the Size of a Walnut while yet green; they grow three or four on the same Pedicle, and when ripe open and discover three Cells, in each of which there is a single Seed, which is the *Nux purgatrix* of the Shops.

This Species of the *Ricinus* Seed has a more violent purgative Virtue than the former. People in the *West-Indies* sometimes venture to take it in obstinate Complaints, but three or four Kernels sometimes operate so violently as to endanger the Life of the Person. They are given principally in Obstructions of the Viscera. *Piso*, who recommends them in many of these Cases, orders three, four, or five for a Dose, and directs that they should be first well cleansed of their Husks, and toasted before the Fire, and then steep'd in Wine; he orders Aromatics also, of several Kinds, to be mix'd with them, and observes, that even with all this Caution, there must be a very good Management during their Operation, to prevent Mischief from them.

The People of the *Brasils* extract an Oil from these Seeds by Expression, which they burn in their Lamps, as it comes cheap enough, and which they also use externally, with great Success against Pains, and for the discussing of Tumors. In Dropsies they not only anoint the Belly with it, but give four or five Drops of it internally in Wine, or give them in Glisters; in both Cases they purge not very gently, but they promote a great Quantity of Water; they also anoint Children's Bellies with it to destroy Worms, and give them two or three Drops of it for a Dose on the same Occasion; they also anoint the Head with it, and by this means destroy all the Vermin that may be there, and cure the breakings out they are subject to on it.

AVELLANA PURGATRIX,
The purging Nut.

This is a Name as improperly given to the Fruit that is call'd by it, as that of Bean to the former, neither of them having any thing of the Nature either of the Nut or Bean, but being truly Species of the *Ricinus* or *Ricinoides* Kind. The *Avellana Purgatrix*, as it is call'd, is a hard Seed of the Bigness of an ordinary Hazel Nut, of a Figure approaching to Roundness, but railed in three Parts so as to give it somewhat of a triangular Form; and consists of a thin but firm and hard cortical Part, of a pale brown Colour, and of a firm and white Substance

Substance within, resembling the Pulp of an Almond; this has no remarkable Smell, and in Taste is the mildest of all this Kind, being sweetish and oleaginous, and much resembling in Taste the Kernel of a Filbert. This is the Species of *Ricinus* of the Shops, distinguished by *Geoffroy* by the Name of *Nucula Cathartica tertia*, the last described being his second: *Caspar Baubine* calls it *Avellana Purgatrix* and *Nucula Cathartica*, and it is sometimes call'd in the Shops the *Ben magnum* or great Ben.

The Plant which produces it is described by *Tournefort* under the Name of *Ricinoides arbor Americana folio multifido*, and by *Breynius* under that of *Ricinus Americanus diviso folio*. It grows to three or four Feet high, its Stem is as thick as a Man's Arm, its Leaves are usually about ten or twelve in number, and they stand in a Cluster at the Top of the Plant, supported on long Pedicles; they are deeply divided and of a pleasant green Colour; the Flowers stand in a sort of Cluster of an umbelliferous Form, on a long and separate Pedicle of a fine bright red Colour. As in all the other Plants of this Kind, some of these Flowers are Male, others Female; the former only serve to impregnate with their *Farina*, the latter, which in fine are succeeded by Fruits of a turbinated Figure, and of the Size of a small Walnut; these are cover'd with a thin yellow Rind, and when ripe they divide into three Capsules, which contain those Seeds we have been here describing. If the Stalk of this Plant be wounded, or only a Leaf be pull'd off, it immediately discharges a Quantity of a yellowish Matter somewhat viscous. A single Seed of this Species is a very violent Cathartic, and given imprudently may even endanger Life; but an Infusion of the Leaves is said to operate much more gently, and to be a very good Medicine in the Jaundice, and in several obstinate chronic Cases.

GRANA TIGLIA,

Molucca Grains.

The *Grana Tiglia* are also of the *Ricinus* Kind, they are the *Nucula Cathartica quarta* of *Geoffroy*, and are call'd by Authors *Ricini Indici semina*, and *Pinei nuclei Moluccani purgatorii*. This Fruit is of an oblong and oval Figure, and of the Size of a small Kidney-Bean. It is elevated on one Side, and depressed on the other, and has four slight Ridges running lengthwise of it: It consists of a thin but somewhat hard external Coat or Rind, of a greyish Colour, variously spotted with Clouds of black, and of a Kernel which is white and tender, resembling in appearance the white Part of an Almond, but of an acrid, nauseous and pungent Taste.

It is to be chosen fresh and plump, with the inner *Nucleus* white, and of no remarkable Smell; when it is old this grows yellow and rancid, or dries and withers. The Plant which produces the *Grana Tiglia* is of the same Class with the rest of these: It is described in the *Paradisi Batavi Prodrromus* under the Name of *Ricinus arbor fructu glabro Grana Tiglia dicto*. By that of *Cadel Avenacu* in the *Hortus Malabaricus*, and by *Caspar Baubine* under that of *Pavana* and *Pinus Indica nucleo purgante*. The Stalks are simple not branch'd, and bear the Flowers in a long Spike at the Top; the Leaves are of an oval Figure undivided, but slightly dentated about the Edges; the lower Flowers of the Spike are Female ones, the upper ones Male; the Fruit which succeeds the former is of a roundish Figure, but has three deep Furrows in it, it contains three Cells, and in each of these one of the Seeds which we call *Grana Tiglia*.
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The Plant is a Native of the *East Indies*, and is found particularly in *Malabar* in great Abundance. It is not only the Seed of this Species of *Ricinus*, but its woody Matter of the Stem is also used in Medicine; the Wood, as it is called, has the Names of *Panana* and *Pavana*, and is light, spongy, of a pale Colour, and is covered with a thin Rind or Bark; it is of a nauseous and disagreeable Smell, and of an acrid and pungent Taste. The Seeds are of the same violently purgative Virtue with those of *Ricinus's*, and are equal to any of them all; they operate both by Vomit and Stool, and carry off great Quantities of Water in Dropsies. Their principal Virtue seems to reside in two little Membranes, which are always to be found buried in the Substance of the pulpy Part. The Kernels are given whole as soon as cleansed from the Husk, and they give two, three, or more of them for a Dose. A single Grain Weight of the Membranes just mentioned are a sufficient Dose. They are apt to operate too violently, but the People in the *Indies*, who frequently take them, find they can always stop their farther Operation by drinking a large Draught of cold Water, or by plunging their Hands and Feet into that Fluid. There is an Oil of these Seeds made by Expression, which purges also very violently; its Dose is not more than a Drop or two. These Seeds given in whatever manner are apt to inflame the Mouth and Throat, and sometimes the *Anus*; they are corrected by the *Indians* by boiling them first in Vinegar; but the best Way is to roast them first, and afterwards to give them with Liquorice, Almonds, and Lemon Juice, and to drink largely of fat Broths after them.

CHAPTER XXIV.

SEMEN PSYLLII,
Fleawort Seed.

THE *Semen Psyllii* is a small Seed of an oblong Figure; it is largest in the middle, and terminates in an obtuse Point at each End; its Colour is a deep brownish black; its Surface is perfectly smooth and very bright and glossy. It is considerably heavy and moderately hard, and when pounded in a Mortar does not become so unctuous and fatty as many of the other Seeds. It has no Smell, and if put into the Mouth it first becomes mucilaginous and soft, but at Length discovers an acrid and disagreeable Taste. Fleawort Seed is to be chosen large, sound, and of a dark Colour. There is sometimes a Sort met with, which is paler and less hard, but this has been collected before it was ripe.

The Plant which produces this Seed is one of the *Tetandria Monogynia* of *Linnaeus*, and of the *Herbæ Flore tetrapetalo anomalæ* of Mr. Ray. Its Root is small and fibrous; its Stalks are round and not very thick; they grow to a Foot or more in Height; the Leaves are long and slender, and stand in Pairs opposite to one another. The Tops of the Stalks support little Clusters of pale whitish Flowers, and these are succeeded by the Seeds already described. Authors have described it under the Name of *Psyllium vulgare*, *Psyllium majus erectum*, and *Psyllium Foliis integris*. The Seeds of *Psyllium* distilled, by the Retort, yield first an insipid and afterwards a saline and subacid Liquor, then a small Quantity of a thick Oil. It is recommended by many as a good
Medicine

Medicine in Jaundices and in Dysenteries ; in the one Case it is expected to act as an Evacuant, in the other merely as an Obtunder of Acrimony. The present Practice however receives it in neither of these Senses, but only as a mucilaginous Seed, serving to the same Purpose as that of the Quince. Hot Water poured on it, and left infusing till cold, becomes soft and glutinous ; and sweetened with Syrup of Mulberries, makes an excellent Gargarism.

C H A P T E R XXV.

SEMEN ACETOSÆ,
Sorrel Seed.

TH E *Semen acetosæ* is a very singular and beautiful Seed ; it is small, but of a perfectly regular Figure, raised longitudinally into three sharp Ridges at equal Distances, which give it a triangular Form, and it is largest in the Middle, and gradually smaller at each End ; it is of a perfectly smooth and even Surface, and very bright and glossy, of a deep brown Colour, seemingly with some Admixture of Purple in it. It is moderately heavy, and somewhat hard, but when pounded, it is rather light and chaffy than damp or unctuous, as the more oily Seeds are. It has no Smell, but has a somewhat austere and astringent Taste ; it is to be chosen new and ripe, which is known by its being of a dark Colour, and very glossy.

The Plant which produces it is the common Sorrel. It is one of the *Hexandria Trigynia* of *Linnaeus*, and of the *Herbæ flore apetalæ sive stamineæ* of Mr. Ray. Authors have described it under the Name of *Acetosa pratensis vulgaris*, and *Oxalis vulgaris*. Its Root is long and slender, yellowish, and of a styptic Taste ; its Stalks striated, and its Flowers reddish, with yellow *Apices* on the *Stamina*. The Seed already described succeeds these, and is wrapped up in a foliaceous triangular Capsule, which is formed of the Leaves of the Calyx.

Sorrel Seeds, distilled in a Retort, afford first a moderate Quantity of an inodorous limpid Phlegm, which has some small Portion of an alkaline Salt in it discoverable by the Taste ; after this comes over a somewhat smaller Quantity of a turbid and reddish Liquor of a manifestly urinous Taste, with something of Acidity in it ; after this an equal Quantity of a redder and more empyreumatic Liquor highly impregnated with a volatile Salt, and with a remarkable Acidity to the Taste ; and finally about an Ounce and a half of a clear Oil from every Pound of the Seeds. The remaining Mass taken from the Retort and calcined, yields a small Portion of a fixed Salt by Lixivation, which has very little of the Alkali in it, and which naturally assumes a foliated or talky Figure. The Seeds of this Plant are found to contain a vastly larger Proportion of the active Principles it abounds with, than either the Leaves or the Roots ; the Seeds are esteemed astringent, and good in Diarrhoeas, Dysenteries, and Hæmorrhages ; they are used in some of the old Compositions of the Shops, but at present, they are wholly neglected in Prescription.

C H A P T E R XXVI.

STAPHISAGRIA,
Stavesacre.

STAVESACRE is a large and irregularly figured Seed; it is about a Quarter of an Inch in Length, and two Thirds of its Length in Diameter in the thickest Part. It is of an irregularly triangular Figure, largest at the Bottom, and tapering to a Point at the Top, and marked every way with a great many irregular Protuberances. It is extremely rough, and of blackish Colour on the Surface, and when cut or broken, it appears of a yellowish one within; it is considerably hard but not very heavy. It is of a disagreeable Smell, and of an acid, pungent, and as it were burning Taste, with an extremely disagreeable Flavour with it. Stavesacre is to be chosen new, large, rough, and yellowish, when broken not dusty or decayed. It is brought to us from *Holland*, but it is also cultivated in many Parts of *France*, *Italy* and *Germany*.

The Plant which produces it is one of the *Polyandria Trigynia* of *Linnæus*, and one of the *Herbæ multiflorosæ sive Corniculatæ* of Mr. Ray. It grows to two or three Feet in Height; its Stalk is large, thick, and strong; its Leaves digitated or cut into several Segments down to the Middle, or to their Pedicle. Its Flowers are large and blue, and resemble those of the Aconite; these grow in Spikes towards the Tops of the Stalks and Branches, and are succeeded by Pods of the membranaceous Kind, holding each several of the Seeds above described, which are the only Part of the Plant used in Medicine. It flowers in *July* and *August*, and the Seed ripens soon after.

The principal Use it is put to among us, is the destroying Vermin in Childrens Heads; to this End it is powdered and mixed with *Cocculus Indi*, and seldom fails of Success. Internally it is violently purgative in a Dose of eight or ten Grains; but we are at present prudent enough not to make any Use of it in that Way.

C H A P T E R XXVII.

SEMEN HYOSCYAMI,
Henbane Seed.

WE have two Kinds of Henbane Seeds in the Shops, which are the Produce of two different Plants of the same Genus, and are named from them the black Henbane Seed, and the white. The *Semen Hyoscyami nigri*, or black Henbane Seed is a small Seed of a roundish Figure. It is however not perfectly round, but rises into Corners and Angles in several Parts, and is somewhat flatted. Its Colour is a deep dusky greenish brown, so deep as to appear at first Sight nearly black. It is of a very uneven and irregular Surface, variously wrinkled; the Furrows not running longitudinally, or in any other regular Distinction, but crookedly, and intersecting one another. It is considerably heavy and moderately hard, and when bruised in a Mortar it becomes unctuous and damp. It is of a very disagreeable Smell, affecting

affecting the Head, and is of a bitterish, acrid, and nauseous Taste. It is to be chosen sound and firm, heavy, and of the darkest Colour that may be. We have it from *Germany*.

The Plant which produces it is one of the *Pentandria Monogynia* of *Linnaeus*, and of the *Herbæ flore monopetalo vasculiferæ* of Mr. Ray. It is described by Authors under the Names of *Hyoscyamus vulgaris*, *Hyoscyamus niger*, and *folia succilla, tabulum* and *mania*. It is a Plant of a peculiarly forbidding Aspect, its Root is large and thick, and is usually divided into several Branches; it is white within but brown on the Surface. Its Stalk is thick and strong, and rises to two Feet or more in Height, its Leaves are large, oblong, and notch'd at the Edges; they are hoary, of an unctuous Clammyness to the Touch, and of a very disagreeable Smell. The Flowers stand in long Rows on the upper Part of the Branches and are large, and of a dead dusky greyish Colour with purple Veins, and a deep purple Umbo at the Bottom. These are succeeded by large Seed Vessels, each having its Cover, and each containing a great Number of these Seeds. It is common in our Fields and under Hedges.

The *Semen Hyoscyami albi*, or white Henbane Seed, is somewhat like the former in Figure, but sufficiently different in many Particulars to be easily distinguish'd. It is a larger Seed and is of a Figure less approaching to round; it is somewhat compressed and very irregularly furrow'd all over its Surface. It is of a pale whitish Colour, considerably heavy and very tough, rather than hard, being easily pressed and flatted by a Blow, but not easily bursting; it is when thoroughly pounded very damp and unctuous, and is of the same disagreeable Smell with the former, only in a less Degree; and of the same acrid and nauseous Taste. It is to be chosen fresh, large and pale colour'd. Our Druggists are apt to sell the black Kind in the Place of it, as it is to be had much easier, but the Fraud is easily detected.

The Plant which produces the white Henbane Seed is of the same Class with that which produces the black; it is described by all the botanical Writers under the Name of the *Hyoscyamus candidus* and *Hyoscyamus albus*. It much resembles the former in its manner of Growth; but its Leaves are smaller, whiter, and of a somewhat less nauseous Smell. Its Flowers also are smaller and paler colour'd, and the Stalks less branch'd. This Species is not a Native of *England*, but it is not uncommon in the Gardens of the Curious. The two Kinds of Henbane Seeds possess the same Virtues, but in a different Degree; the black has them in greater Force, and for that reason the white is generally prescribed; but the black, which is the most common, is notwithstanding what is generally used. Black Henbane Seed, distill'd in a Retort, affords first a limpid and inodorous Liquor of a faintly saline Taste, after this a somewhat larger Quantity of a yet limpid Liquor, which with its saline has also a manifestly acid Taste; after this comes over a small Quantity of a reddish, acid and austere Liquor; and after this a Quantity equal to all the rest, and to a seventh Part or thereabouts of the whole Weight of the Seeds of a reddish Liquor impregnated with a volatile urinous Salt; and after this a fourth Part at least of the Weight of the whole Seeds in an Oil thick like a Syrup, and of an empyreumatic Smell. The remaining Matter in the Retort, calcined in an open Fire and lixiviated, yields a small Quantity of a fix'd Salt, rather of the *Sal Salsus*, than of the alkaline Kind. The Seeds of both Kinds are powerful Narcotics; but they disturb the

Head

Head and occasion a thousand strange Fancies, and often bring on Deliriums. There are many Histories in Authors of Credit of the Effects of these Seeds, which leave them upon a very little better Footing than that of a Poison; Madness, and even Death having been the Effects of taking them. There are not wanting however Authors who recommend them in many Cases, particularly in spitting of Blood; they also are Ingredients in many of the old Compositions of the Shops, but the present Practice very judiciously seems to wholly reject them.

PAR TS of V E G E T A B L E S

U sed in M E D I C I N E.

C L A S S the S E V E N T H.

R O O T S.

As the Bodies of this Class are considerably numerous, they will be arranged here under three Divisions. Under the two first will stand the dry'd Roots kept in the Shops, as they are, 1. more frequently used, and 2. less frequently; and under the third, such as are brought fresh and juicy to the Markets.

Of the first Division, or dry'd Roots more frequently used in Medicine are,

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| 1. RHUBARB. | 15. GENTIAN. | 28. ANGELICA. |
| 2. JALAP. | 16. SPIKENARD. | 29. PYRETHRUM. |
| 3. HERMODACTYLS. | 17. VALERIAN. | 30. TORMENTILL. |
| 4. TURPETH. | 18. BIRTHWORT. | 31. BISTORT. |
| 5. MECOACAN. | 19. FRAXINELLA. | 32. CINQUEFOIL. |
| 6. WHITEHELLEBORE. | 20. GINSENG. | 33. CONTRAYERVA. |
| 7. BLACKHELLEBORE. | 21. TURMERICK. | 34. SNAKEROOT. |
| 8. IPECACUANHA. | 22. PIONY. | 35. CHINA. |
| 9. ZEDOARY. | 23. ARUM. | 36. SARSAPARILLA. |
| 10. ZERUMBETH. | 24. MADDER. | 37. IRIS. |
| 11. CASSUMUNAR. | 25. ALKANET. | 38. ELE CAMPANE. |
| 12. GINGER. | 26. PAREIRA BRAVA. | 39. LIQUORICE. |
| 13. ACORUS. | 27. CYPERUS. | 40. ERYNGIUM. |
| 14. GALANGAL. | | |

Of the second Division, or dry'd Roots less frequently used in Medicine, are,

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| 1. COSTUS ARABICUS. | 6. RHAPONTICUM. | 11. ASARUM. |
| 2. DORONICUM. | 7. SALEP. | 12. ESULA. |
| 3. ANTHORA. | 8. CARLINA. | 13. CYNOGLOSSUM. |
| 4. BEHEN. | 9. IMPERATORIA. | 14. SAXIFRAGA. |
| 5. SENEKA. | 10. MEUM. | |

Of the third Division, or Roots brought fresh and juicy to the Shops, are,

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| 1. MARSHMALLOWS. | 7. POLYPODY. | 13. WHITE BRYONY. |
| 2. PARSLEY. | 8. FERN. | 14. WATER LILLY. |
| 3. BUTCHER'S BROOM. | 9. TRIGWORT. | 15. WHITE LILLY. |
| 4. GRASS. | 10. BURDOCK. | 16. SOLOMON'S SEAL. |
| 5. ASPARAGUS. | 11. BUTTERBURR. | 17. COMFRY. |
| 6. SQUILL. | 12. GARLICK. | 18. DOCK. |

DRY'D ROOTS,

More frequently used in Medicine.

CHAPTER I.

RHABARBARUM,
Rhubarb.

RHUBARB is a thick Root of an oblong Figure, large at the Head and tapering pretty suddenly as it extends in Length. It is sometimes single, but more usually divided into two or three Parts at the lower End. We frequently meet with it in Pieces of four, five, or six Inches long, and three or four in Diameter at the top; it is of a tolerably smooth and even Surface, and externally of a faint yellow Colour, with a large Admixture of brown; it is moderately heavy, but not hard: it cuts through very freely and easily with a Knife, especially if the Blade of it have been render'd a little unctuous, first by drawing it over an Almond or any other fatty Substance. When fresh cut it is found to be of a marbled or variegated Appearance, its Colours are a pale but bright yellow and a faint reddish. The yellow is the Ground Colour, and the red is disposed in short irregular Veins, much in the manner of the darker Colour in the common Nutmeg. It is of a somewhat lax and spongy Texture; it has an agreeable and somewhat aromatic Smell, and a bitterish, astringent and subacid Taste, upon the whole not disagreeable: It tinges the Spittle to a fine bright yellow on being held some time in the Mouth.

Rhubarb is to be chosen fresh, tolerably hard, and moderately heavy, and such as does not dust the Fingers in handling, such as infused a few Minutes in Water

Water gives it a fine yellow, and when bruised in a Mortar has a reddish Colour with the yellow. Rhubarb is not so often adulterated as damaged; care is to be taken that it be not wet nor rotten; much of it is subject after keeping too long to be Worm-eaten and full of Holes on the Surface. There are certain Traders in this Drug, who have a way of filling up these Holes with Powder of some of the worst and most decay'd Pieces, but this is easily discover'd, and such Rhubarb always to be rejected.

The Antients were not acquainted with Rhubarb, it is an Error to suppose they meant our Rhubarb by their *Rha* and *Rheum*; *Dioscorides* and *Galen* evidently describe under that Name, the Rhapontic to be described in the next Chapter, a Root of a different Plant, and very different in its Virtues from our Rhubarb.

Rhubarb is brought to us from *Russia*, and from the *East-Indies*. It is produced in great Plenty on the Confines of *China* and *Tartary*, and in many Parts of *Tartary* itself: The Mountains of *Tibet* abound with it, and a very considerable Part of what is sent into *Europe* grows there. We are not certain that it grows in any Part of *Russia*, tho' we receive considerable Quantities of it from thence; it is possible it may be first brought thither from *China* and *Tartary*, and then sent to us.

The *Chinese* are very careful in their manner of drying it. They take up the Root only in Winter, or early in Spring before the Leaves begin to appear, they cut it into such Pieces as they think proper, and lay it on a Table in a shady Place, turning it once or twice a Day for two or three Days; after this they string the Pieces on a Cord at a Distance from one another, and then hang them up in a shady Place where they may dry leisurely. It is by this Management that the Rhubarb is render'd so firm and solid as we find it; for if it were hung up to dry at once in a warm airy Place, it would become light and spongy. They say also that if the Root be taken up in the Summer, it is not only light and of little Virtue, but that it has nothing of the reddish marbling, that is one of the great Characters of its Goodness with us.

The Plant which produces the true Rhubarb is of the Number of the *Ennandria Trigynia* of *Linnaeus*. It was long before it was known in *Europe*, but of late it has been sent from *Russia* to the Gardens at *Paris* and *Chelsea*, in both which it thrives extremely well, and stands the severest Colds unhurt. It is the *Rhabarbarum folio oblongo crispo, undulato, flabellis sparsis* of *Jussieu*, and the *Lepathum Bardanæ folio undulato glabro* of *Mr. Rand.* The Root of this Plant shews it to be the genuine Rhubarb, and it agrees perfectly with a Specimen of the Plant which I some Years since received from *Dr. Amman* of *Petersburg*, which himself had gather'd on the Mountains of *Tibet*, and which a very ingenious Gentleman, *Mr. Bell*, lately return'd from that Part of the World, and who has also seen it growing there, declares to be the true Plant. These are sufficient Proofs that we now have the true Rhubarb Plant among us, and it will be easy to propagate a Quantity of it in order to try whether its Virtues, when produced with us, will be the same with those it possesses as brought from its native Climate.

The Root of the Rhubarb Plant is long, thick, and perennial, its Bark while growing is of a brownish red Colour, but under this the Substance of the Root is of the true Colour of the dry'd Rhubarb, only deeper, of the right

Nutmeg Grain, marbled with red and yellow, and has the true Smell and Taste of Rhubarb, especially about the upper Part of the Root : It has a Viscosity indeed in the Mouth, that Rhubarb, as we meet with it in the Shops, has not, but this may only be the Difference of the same Root fresh and dry'd. A number of large Leaves are produced first from this Root, they are of a fine green, elegantly undulated at the Edges, of an oblong Figure, broadest at the Base, and somewhat auriculated ; they stand on very thick and fleshy Pedicles, moderately long, convex in their under Part, and flat on the upper ; these divide each into five large and prominent Ribs, running with many Divisions through the whole Leaf ; in the midst of these Leaves rises a Stalk, of an angular compress'd Figure, striated, and rising to about three Feet high, which, from the Middle to the Top, is furnished with Clusters of little Flowers, surrounding it at certain Distances ; they are very small and white, and are succeeded each by a single Seed of a triangular Figure. It flowers in *June*, and ripens the Seed in *July* and *August*.

Rhubarb, on a chemical Analysis, is found to be composed of a large Quantity of Sulphur and fix'd Salt, a small Portion of an acid Salt, and a large Share of Earth : On these Principles the whole Root must be of the gummous Kind, and its earthy and gummous Parts are very easily separated, and that in large Quantity. From an Ounce of Rhubarb there may be prepared, by means of common Water alone, somewhat more than an Ounce of the gummous Extract. There is but a very small Quantity of resinous Matter in Rhubarb, and what there is, is blended with a large Share of alkaline Salt. Two Ounces of Rhubarb, ever so carefully managed, will not yield more than about three Drams of a resinous and that a saline Extract ; the Salt in this is in so large a Portion, that it will readily dissolve in common Water, and this shews us the Reason why Tincture of Rhubarb, made even in rectified Spirit of Wine, does not become milky on being mix'd with Water, as many of the other Tinctures of this Kind do.

Rhubarb possesses the double Virtue of a Cathartic and an Astringent, it readily evacuates particularly the bilious Humours, and afterwards gently astringes and strengthens the Stomach and Intestines. It is given with great Success in all Obstructions of the Liver, in the Jaundice, in Diarrhœas, and in the *Fluor Albus* and Gonorrhœas : It is also an excellent Remedy against Worms. It is sometimes given as a Purgative, sometimes as only an Alterant ; and which ever Way it is taken it is an excellent Medicine, agreeing with almost all Ages and Constitutions. The only Cases in which its Use is to be avoided, are those in which the Blood and Viscera are too hot. *Fallopious* says it is never to be given to People who have Disorders of the Kidneys or Bladder, as it is apt to occasion an extraordinary Heat in those Parts ; and *Simon Pauli* tells us of Vertigoes brought on by a too free and continued Use of it.

Rhubarb is given in Powder in Infusion, and in its own crude solid State, the chewing it being perhaps the best Way of giving it of all others, when it is intended to strengthen the Stomach and assist Digestion ; the Quantity of five and twenty Grains, or thereabout, should be chew'd daily on these Occasions, an Hour before eating ; this is also by much the best Way of taking it against Obstructions of the Viscera. Its Dose in Powder is from half a Scruple to two Scruples, in Infusion about a Dram of it will purge gently ; but the Dose may be

be increas'd up to two Drams. It is observable, that neither the Infusion nor the Decoction, nor even the Extract of Rhubarb purge near so briskly as the Root itself in Powder.

The Preparations of Rhubarb in Use in the Shops are, 1. The Tincture in Spirit. 2. The Tincture in Wine: And, 3. The Extract: Though the last is but little used.

TINCTURA RHABARBARI VINOSA,
Tincture of Rhubarb in Wine.

Take fine Rhubarb two Ounces; of the Seeds of the lesser Cardamom, clear'd from their Husks, half an Ounce; of Saffron two Drams; bruise the Rhubarb to a gross Powder with the Cardamoms among it, then cut the Saffron small with a Pair of Scissars, and put the whole into a Matrafs with a Quart of white Wine, let them stand three Days together without Heat, often shaking them; then strain off the Tincture, and filter it for Use.

TINCTURA RHABARBARI SPIRITUOSA,
Tincture of Rhubarb in Spirit.

Take of fine Rhubarb two Ounces; of the lesser Cardamom Seeds, freed from their Husks, half an Ounce; of Saffron two Drams; Proof Spirit a Quart; make the Tincture without Heat in the same manner as the former.

Both these Tinctures are purgative, and strengthen the Stomach and Intestines afterwards: They are given in most of the Cases in which the Root itself is proper. Their Dose is from one Ounce to two Ounces and a half; the latter purges somewhat more strongly than the former.

EXTRACTUM RHABARBARI,
Extract of Rhubarb.

Take of fine Rhubarb a Pound, cut it into thin Slices, and afterwards bruise these to a gross Powder in a Mortar, put it into a Matrafs and pour on it two Quarts of Water; set the Matrafs in a Sand-heat, so as to keep the Liquor moderately warm for ten or twelve Hours; then strain off the Infusion, return the remaining Mass into the Matrafs, and pour on it rectify'd Spirit of Wine a Quart, set it again in the Sand-heat for twenty four Hours, then strain off the Tincture: mix this Liquor with the former, and gently evaporate the whole to the Consistence of an Extract; this is gently purgative; its Dose is from ten Grains to a Dram; but in Truth, the plain Powder of the Root seems to be a much better Medicine for all the Purposes in which this cou'd be given.

CHAPTER II.

JALAPIUM, or JALAPA,
Jalap.

JALAP is a firm and solid Root, of a wrinkled Surface, and of a close internal Texture; of a blackish Colour on the outside, and of a dusky brown within: It is sometimes of a roundish, or oval, but more usually of an oblong Figure and considerably thick; but we seldom see it whole, our Druggists commonly receiving it in Slices, from half an Inch to two Inches in Diameter, and about a sixth of an Inch thick, into which it has been cut transversely while

while fresh for the Convenience of drying. These Slices are heavy and hard to break ; of a faintish Smell, and of an acrid and nauseous Taste.

The best Jalap is that which is most compact and firm, and of the deepest brown Colour within, the most disagreeable to the Taste, and that which takes Fire most readily, and burns most briskly when held to the Flame of a Candle.

It is sometimes adulterated with the Root of white Bryony, cut into Slices and dried ; but this Cheat is easily discovered by the Bryony Root being paler colour'd, lighter, and more brittle : The best Jalap is liable to decay by long keeping, and will grow light, dusty, friable, and often is Worm-eaten, in all which Cases it is to be rejected, as having lost the greater Part of its Virtue.

Jalap was wholly unknown to the Antients ; the *Europeans* had no Knowledge of it till after the Discovery of *America*. It had its Name *Jalapium*, or as others write it *Jalapa*, from *Xalapa*, the Name of a Town in *New Spain*, in the Neighbourhood of which it was first discover'd ; though it is now principally brought to us from the *Madeiras*.

The Plant which produces it has been erroneously supposed by some to be of the Bryony, and by others of the Nightshade Kind ; but it is truly a Species of the Convolvulus or Bindweed, as appears from dry'd Specimens of the Plant, collected upon the Spot, where the Roots are gather'd for Use.

Its Principles, on Analysis, are found to be a large Quantity of an acrid and pungent Salt ; a small Portion of Acid, with Sulphur and Earth.

Good Jalap will yield a fourth Part of its Weight of Resin, and the Remainder treated in an aqueous Menstruum, will give a very large Quantity of a gummous Extract. By Distillation it affords more than a fourth Part of its Weight of Oil.

Jalap is not made an Ingredient in any of the the officinal Compositions of our Shops. *Sylvius de la Boe* prescribes it in his hydragogue Electuary, and *Charas* in his Antihydropic of the same Form. It enters the Composition also of *Rolfinck's* Catholic and Cholagogue Extract ; and of the arthritic Pills of *Scheffer* ; and of the hydragogue Syrup, and cachectic Pills, and aperient cachectic Syrup of *Charas*.

With us it is of very frequent Use in extemporaneous Prescription, given in the Form of Boluses and Draughts. Its Dose is from twenty to thirty or thirty five Grains ; when larger Quantities are found necessary, it is owing to the Avarice of the Druggist or Apothecary, who powder not the select Pieces, but such as are decay'd and have lost their Virtue. Its common Correctives are Ginger and Cream of Tartar, but Nature has prepared it so well to our Hands, that it indeed needs no Addition. The best Method of giving it is in a Draught made with white Wine, and prepared at least twelve Hours before the Time it is to be taken, in which Case the Wine has Time to open the Body of the Medicine, and prepare it for acting with the greater Ease.

It is an excellent Purgative in dropical, and all other Cases where serous Humors are to be evacuated. The only Caution necessary in the Use of it, is, that it should not be given in acute Fevers, nor to Persons of dry and hot Constitutions, for in these Cases it is liable to the same Mischiefs as other acrid Purgatives, and will sometimes bring on Heat and Inflammations in the Viscera. Some Authors have condemn'd Jalap on this Account, from the Experiment
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of *Wepfer*, who found Inflammations of the Stomach and Intestines of some young Puppies, to which he gave it. But it is to be observed, that he gave the Resin of Jalap, and that in an immoderate Dose.

The Artifice of our wholesale Dealers in compound Medicines has introduced Jalap into the Composition of many of them, to give the purging Virtue required in them at a less Expence than it could be done by following the Orders of the Dispensatories. The lenitive Electuary, *Caryocostinum*, and *Elixir Salutis* sold by our Chemists (as they call themselves) owe the greater Part of their purging Virtue to this Drug.

The Preparations of Jalap in Use with us, are a *Tincture*, an *Extract*, and a *Resin*.

Tincture of Jalap.

Beat to a gross Powder half a Pound of good sound Jalap, put it into a Matrafs, pour on it a Quart of Proof Spirit; fit another Matrafs into the Neck of the first to make a double Vessel; lute the Junctures and set it in a Sand Heat for three Days, shaking the Matter thoroughly together, at least once a Day. When cool, strain off the Tincture, and filtrate it through Paper for Use.

It has been the usual Custom to make the Tincture of Jalap with rectified Spirit of Wine; this *Menstruum* is very well adapted to extract the Tinctures of Medicines, whose Virtues lie wholly in their Resin; but as the purgative Virtue of Jalap lies as well in its saline, gummous, and saponaceous Parts, as in its resinous ones; the College has greatly amended this Tincture in the last Dispensatory, by ordering it to be made only with Proof Spirit, which being a Menstruum composed of spirituous and aqueous Parts will act on both, and extract a much better Tincture. Accordingly it proves on Experiment, that this Tincture purges more strongly than that made with rectified Spirit; and that whereas after a Tincture as strong as possible has been extracted with the latter Menstruum, an Extract may be prepared from the Remainder with Water, which has considerable Virtue. When the Tincture has been drawn with Proof Spirit, scarce any purging Virtue is left in the Remainder.

This Tincture purges briskly, and is of Use in all Cases, where the Root in Substance is proper; its Dose is from half a Dram to two Drams.

Extract of Jalap.

Beat any Quantity of Jalap to a gross Powder, put it into a Matrafs, and pour on it six Times its Weight of rectified Spirit of Wine; proceed as in making the Tincture of Jalap, and filtrate the Tincture.

Boil the Remainder from which this Tincture was extracted, in twice as much common Water as there was Spirit of Wine used for the Tincture; when the Liquor is as strongly impregnated as it can be, filter it off.

Evaporate both these Liquors in a Sand Heat, till they are of the Consistence of a Syrup; then mix them, and continue the Evaporation till the whole is of a Consistence fit to form into Pills.

The two Extracts will thus unite into a uniform Mass, and retain all the Virtues of the Root.

This Extract is of the same Virtue as the former Tincture; its Dose is from ten to twenty Grains.

Resin

Refin of Jalap.

Beat to a gross Powder a Pound of good Jalap, put it into a Matrafs, pour on it three Quarts of rectified Spirit of Wine. Extract the Tincture in the same Manner as in making the former Tincture of Jalap. Filtre the Liquor, and distil off three Pints of the Spirit in *Balneo Mariæ*.

Pour the Remainder of the Tincture into a large Vessel of cold Water; the Liquor will become milky; cover it with a Cloth, and after four and twenty Hours, the Resin of the Jalap will be precipitated to the Bottom of the Vessel in Form of Turpentine. Wash it several Times in fresh Waters, and dry it in the Sun, it will grow hard like common Resin.

This purges the most violently of all the Preparations of Jalap; its Dose is from five to ten or twelve Grains; but the Extract last described is greatly preferable to it on all Occasions.

The Quantity of Resin produced will be according to the Goodness of the Jalap, and the Care employed in extracting the Tincture. *Lemery* limits it to one Ounce and six Drams from the Pound of Jalap. *Geoffroy* talks of obtaining three Ounces from twelve. And from picked Jalap, and repeated Quantities of fresh Spirit, I have come so nearly up to this, as to procure three Ounces and a half from sixteen; but it is not to be expected that the common Processes will yield nearly so much.

CHAPTER III.

HERMODACTYLUS,

Hermodaetyl.

THIS is a Drug about which there has been great Controversy, among Authors who have treated of these Subjects, in the Times when Natural History was less known: Many supposed it to be the Fruit of a Plant; this however is an Opinion too absurd to be at this Time advanced by any Body, and notwithstanding the singular Figure of the Hermodaetyl, there is no Body who now disputes its being a Root.

There is scarce any Root so well distinguished by its Shape as the Hermodaetyl; it is of a determinate and regular Figure, and represents a Sort of trigonal Pyramid sinuated in the midst of the Base, or the common Figure of a Heart cut in two; one End is broad, the other terminates in an obtuse Point, and one Side is protuberant, the other flat, and appearing as if the Root had been split at it; and on the protuberant Side there runs all along from the Point or *Apex* to the Center of the Base a Furrow. It is not much less determinate in Size than in Shape; it is seldom met with of less than half an Inch in Length, and very rarely of more than an Inch. It is of a perfectly smooth and even Surface, and of a loose spongy Texture, easily falling into a farinaceous Powder on being rubbed in a Mortar. It is moderately heavy, and has very little Hardness; it does not cut easily with a Knife, and where it does, it exhibits an irregular Surface. Its Colour on the Surface is a pale brown, with a faint Cast of reddishness among it; within it is perfectly white, like Flower of Wheat. It has no Smell, and appears at first taking into the Mouth to have no Taste, but after it has been some time held there, it becomes vis-

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cous, and afterwards is found to have a peculiar Sweetness with some Acrimony.

Hermodytys are to be chosen large, sound, heavy; and firm; there is scarce any Root more subject to decay and to be worm-eaten than this. In this Case it becomes dusty and friable, and is full of little round Holes on the Surface: Such as is in this Condition is wholly to be rejected, as having lost all its Virtue. We are not to imagine, that the Hermodytyl, as we have been here describing it, that is, as it is found among the Druggists, is the complete Root of a Plant in its natural State. It is rather the *Nucleus* of a bulbous Root divested of its external Coats, and prepared for drying and for medicinal Use.

The ancient *Greeks* were not acquainted with the Hermodytyl. The *Arabs* were the first who brought it into Use, and from them it was received among the later *Greek* Writers. *Paulus Aegineta* is the first of these who has mentioned it.

Hermodytys are brought to us from *Aegypt* and *Syria*, where the People eat them in order to make themselves fat. The Plant which produces the Hermodytyl is of the Number of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ bulbosa Radice præditæ* of Mr. Ray. It is a Species of *Colchicum*, or Meadow Saffron, very different from ours indeed, and probably not yet well described by any Author. *Tournefort* however goes so far as to tell us, that he saw the Hermodytyl Plant in *Asia Minor*, and that it had the Leaves and Flowers of the *Colchicum*. It has been objected that the Roots of the common *Colchicum* are not in Shape like the Hermodytys, and that they are so different in Effect, that they are poisonous, not gently purgative; but it may be answered, that we do not receive the whole Root of the Species that produces the Hermodytyl: And that it is very possible for one Species of a *Genus* of Plants to be poisonous, and another safe internally.

The Name Hermodytyl has been given by some Authors also to the white Behen, but very improperly and without any Foundation for it in the Writings of those Authors who first described it. *Serapio* treats of *Colchicum* and Hermodytys in the same Chapter; and gives us very sufficient Proof that he knew them to be of the same Class of Plants, though so many Errors crept into the World about them afterwards.

Hermodytys, examined by a chemical Analysis, yield a large Quantity of an acid, and no small Portion of an urinous Phlegm, a little Oil, a large Quantity of Earth, and a very small Quantity of fixed alkali Salt.

The People of *Aegypt* and *Syria*, where these Roots are common, use them medically, while fresh and just taken out of the Earth, as a Vomit and Purge; but they have a way of roasting them, so as to make them a Kind of Food. The dried Roots, as we have them in the Shops, are a gentle Purge, and have the Credit of being peculiarly good in rheumatic Disorders. *Aegineta* talks of curing Rheumatisms with Hermodytys alone in two Days; but we do not find any such amazing Effects from them at this Time. The Dose in Powder is from a Scruple to a Dram or more; but they are so weak a Purge as seldom to be given alone; their proper Correctives are the Spices, Ginger, Cloves, and the like.

Hermodytys have been made Ingredients in many officinal Compositions, at present they are little used except in the *Electuarium Caryocostinum*.

CHAPTER IV.

TUPRETHUM,
Turpeth Root.

TURBITH, or Turpeth Root, in the Form we meet with it in the Shops, is not a whole Root, but only the cortical Part of the Segments of a very long Root, thus cut and separated from the central Matter before they are dried for Use. We meet with it in oblong and tolerably even Pieces, rolled up in the Manner of Cinnamon or some other Bark; they are usually three, four, or five Inches long; though this Measure is solely at the Pleasure of the People who cut it, for the whole Root is four or five Feet in Length. These Pieces are usually about the Thickness of a Man's little Finger, and smooth on the Surface. They are of a tough and firm Texture, but when broken they appear resinous, and often have also little Granules of Resin on their Surface; they are not very heavy, but so hard that they do not cut easily through with a Knife. They are of a brown, or else of a dusky grey Colour on the Surface, and whitish within; they have very little Smell, but are somewhat acrid and nauseous to the Taste.

Turpeth is to be chosen in smooth and even Pieces, not wrinkled on the Surface; of a greyish Colour, and not too full of the Appearance of Resin on the Surface. The more resinous they truly are the better, but those Pieces among what we meet with that are most so, are usually sophisticated; and the resinous Matter is laid on by Art, in order to make People believe they are naturally very resinous.

It is certain that Turpeth was wholly unknown to the ancient *Greeks*: The *Arabians* were the first that we know of, who brought it into Use in Physic; and themselves did not all the Time know, but that the *Greeks*, whom they attempted to follow in every thing, had used it. *Avicenna* plainly describes under the Name of Turpeth, the very Root we now call so; yet *Serapio* knew so little of the Matter, as to translate the Description of the *Tripolium*, or Sea Starwort, out of *Dioscorides* into his Chapter of Turbith, though he afterwards adds from some of his own Countrymen Descriptions of the Root that perfectly agree with that given by *Avicenna*, and not at all with the *Tripolium* of *Dioscorides*; which as is evident from that Author's Words, and has been since fully proved by *Matthioli* in his Commentaries, was perfectly different in all Respects from Turpeth.

It is Pity, that *Avicenna*, who has given us so good a Description of the Root, says nothing of the Plant it belongs to; this might else have alone cleared up the whole Matter. *Mesue* very badly describes the Turbith, he makes several Kinds of it, as a yellow, a white, a grey, and a black; as also a great and a little Kind, and tells us that they were the Roots of ferulaceous Plants, abounding with an acrid, milky Juice. All that we can collect from this is, that *Mesue* knew nothing of the Origin of the true Turbith, and that he confounded with it the cortical Part of the Roots of some Plants of a very different Kind, with which, the People who traded in Drugs in his Time, probably adulterated it.

Aetuarins

Aquarius tells us there are two Kinds of Turbith, a whitish, and a greyish; but this probably has been only founded on *Avicenna's* saying that Turbith was of two Colours, some of it being whitish, and other greyish; or rather some greyish and other brownish; he indeed calls one the white, the other the black Turbith; and some have thought his white Turbith the *Alypum* of *Dioscorides*, and the black one the Root of the *Pityusa*; all this however is but Conjecture.

Among the late Writers some have taken the Tithymal, others the *Antioch* Scammony, and others the several Species of *Thapsia* to have been the Turbith of the *Arabians*; but it rather appears from *Avicenna's* accurate Description of it, that they had our true *Indian* Turbith, and call'd it by that Name, tho' there appear to have been many Adulterations of it in Use among them.

The Plant which produces the Turbith of the Shops, is of the Number of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Herbæ flore monopetalæ vasculiferae* of Mr. Ray. And is described by *Herman* in his *Catalogus horti Lugduno-Batavi*, in a very full and accurate manner under the Name of *Convolvulus Indicus alatus, maximus, foliis Ibisco nonnihil similibus angulosis*.

The Root is very long, and contains within the Bark which is sent to us, a woody Matter; this cortical Part, when cut or broken while fresh, yields a milky and glutinous Juice, very acrid and soon drying into a dusky yellowish Resin. This is the Matter that should be found concreted on the Surface of the Root as brought to us, but it very seldom is so, at least in any Quantity. The Stalks of the Plant are firm and tough, they run to many Yards in Length, and either trail along the Ground, or curl themselves about the neighbouring Trees. The Leaves are not unlike those of the Marshmallows, soft and downy, and notch'd a little at the Edges. The Flower is white, and in Shape and Size much resembles that of the common Bind Weed that grows in our Hedges; the Seed Vessels contain each four Seeds. The Plant grows in *Java* and *Malabar* under Hedges, and about the Borders of their Gardens the Roots are taken up in Autumn, and what we have of them imported into *Europe* are principally from the Province of *Guzarat*, where the Plant grows in great Abundance.

Garcias was the first Author who gave us a true Account of the Turpeth Plant, but he commits an Error in supposing the Part used in Medicine to be the Stalk of it; it is truly the cortical Part of the Root.

Turpeth chemically analysed yields a large Quantity of an acid, and some Portion of an urinous Phlegm, a volatile Salt in small Quantity in a concreted Form, and a large Portion of essential Oil; after the Separation of all these, there remains a large Quantity of Earth.

Turpeth affords a small Quantity of a resinous Extract, by Means of Spirit of Wine, but it yields a very large one of a gummous Extract if treated with Water; blue Paper of the deep Kind wetted in a Decoction of Turpeth becomes red.

The Virtues of Turpeth are of the purgative Kind; it is not a very brisk Medicine in its Operation nor a very easy one, but it is of peculiar Effect in dislodging the stagnant Humours from the most remote Parts of the Body. It is given in Rheumatic Cases, in particular, with very good Effect; its Dose is from fifteen Grains to forty in Powder. Its watery or gummous Extract purges in a Dose of about a Scruple, and the Resin in fifteen or twenty Grains; but they

they are rarely to be met with, nor indeed is the Root itself often in a Condition fit for Use: the Gripes it generally is attended with in working are to be remedied by Means of Ginger and the other Spices, and its Sluggishness is best excited by adding to it Jalap, if given in Powder, and Sena in Decoction or Infusion.

It has been made an Ingredient in many officinal Compositions, but it lately has lost its Credit so far as not to be regarded even in these.

It is not unfrequent to meet with Roots of a very different Kind from the true Turbith in the Shops under its Name, among these the Roots of the *Laserpitium foliis latioribus lobatis* of *Morison*, those of the *Apium Pyrenaicum Thapsiaefacie* of *Tournefort*, and particularly those of the *Thapsia sive Turbith garganicum semine latiore* of *John Baubine* are too often found; these ought all to be rejected. They are Roots of Plants of wholly different Natures and Genera, and the last in particular is so acrid and caustic, that it inflames the Throat and Stomach, and deserves little less than the Name of a Poison.

CHAPTER V.

MECHOACAN,

Mechoacan.

MECCHOACAN is a large Root of a Plant of the same Genus with the Turpeth. When intire it is usually twelve or fourteen Inches long, and of the Thickness of a Man's Wrist or more. It is usually divided into two Branches at the Bottom, and is of a somewhat rough Surface mark'd with several imperfect annular Furrows. We never meet with the Root in this perfect State however, unless when sent over as a Curiosity; what we see of it in the Shops is in Slices, into which it has been cut transversely for the Convenience of drying it. These are of very various Sizes, from the Breadth of a Crown Piece to that of a Shilling are the more common, there are larger, but they are not so frequent, and there seldom are smaller than what are last mentioned.

These Slices are of various Thickness, from an eighth of an Inch to nearly half an Inch, and the smallest Part of the Root has often been cut into the thickest Slices. The cortical Part of these is rough on the Surface, their internal Part is not very hard, tho' of a somewhat close Texture; it is of a greyish or yellowish white Colour, and does not shew any Marks of Veins or Fibres, or at the utmost in the oldest and largest Roots, but very imperfect Traces of them. They are light and easily powder'd, and are of a sweet mawkish Taste with a latent Acridness, and if held any time in the Mouth, have a Nauseousness that almost excites to Vomiting.

The Segments of the older Roots, if nicely examin'd, generally shew something of the Traces of the concentric Circles, of which they have been form'd, but these at best are very imperfect.

Mechoacan is to be chosen in sound and firm Pieces, with scarce any Smell, and having no Bitterness to the Taste. Such Pieces as are brittle and dusty, when broken, are wholly to be rejected. It is liable to a very unfair Adulteration with white Bryony, which is a Root that somewhat resembles it in Shape and Colour; but

but this Cheat is easily discover'd, for the Slices of Bryony shew on both their Surfaces a Number of Radii running from the Center to the Circumference, which the true Mechoacan wants, and the Circles in the Bryony Root are much more distinct and fair than in the other: The Bryony is also more spongy in its Texture, and more acrid and bitter to the Taste, and much more nauseous than the Mechoacan. The true Mechoacan also ought to be fresh, for it hardly retains its Virtue more than three Years.

It was wholly unknown to the antient *Greeks*, and to the *Arabians*. Its first Introduction into *Europe* was about two hundred and twenty Years ago: *Monardes* was the Man who did most toward the bringing it into Credit and general Use.

It is brought to us from the Province of *Mechoacan* in South *America*, from whence it has its Name; some have called it white Rhubarb from its purgative Virtue, and from its being a thick Root of the Nature of Rhubarb.

The Plant which affords it is one of the *Pentandria Monogynia* of *Linnaeus*, and of the *Herbæ flore monopetalo vasculiferæ* of Mr. *Ray*. *C. Baubine* and some of the other botanical Writers, from the Resemblance of its Root to that of our white Bryony, and from hearing that it was a climbing Plant, have supposed it a Species of Bryony; but it is truly a *Convolvulus* or Bind Weed as well as the Turpeth, and is described by the latest Authors under the Name of the *Convolvulus Americanus Mechoacana dictus*, and by *Marcgrave*, under that of *Jetuca Brasiliensibus sive Mechoacana*.

The Plant runs to a great Length in its Stalks, which climb upon every thing that stands near them, and are angular and full of a resinous milky Juice, which they shed in Abundance on being cut or broken. The Leaves stand singly and alternately on the Stalks, and are broad at the Base, and of a cordated Form, thin, and of a deep green Colour, and very highly rib'd underneath. The Flowers are like those of the common Bind Weed in Shape, and are of a pale Flesh Colour on the outside, and of a deeper or purplish Colour within. The Capsules which succeed these contain large Seeds of the Bigness of a Pea, but of a triangular Form and somewhat compressed. The Root is taken up in the Spring, and after cutting into Slices is hung upon Strings to dry. They have also a way of procuring the *Fæculæ* of it, by pressing the Root and letting the thicker Part of the Juice subside, and afterwards pouring off the watery Matter and drying the Remainder.

It is to be observed that *Hernandez* describes a wrong Plant under the Name of *Mechoacan*, at least a different one from that call'd *Mechoacan* by *Monardes*, *Marcgrave*, and the rest, and used as such among us: he calls it *Radix Michuacana* and *Tacuache*, and tells us that it is so hot as to burn the Mouth and Throat on chewing but the least Piece of it. This by no means agrees with our Root, nor does his Description of the Plant it belongs to at all agree with the true Description of the *Mechoacan*.

Mechoacan, examined by a chemical Analysis, yields a large Quantity of an acid Phlegm, a small Portion of an urinous Liquor, and a good deal of essential Oil. A Resin may be extracted from it by Spirit of Wine, but that in much smaller Quantity than from Jalap; and a Decoction of it in Water is scarce at all cathartic, the Parts on which its Virtues of that Kind depend, rising in a great Part with a boiling Heat.

The

The Root in Powder is a gentle and mild Purgative. It does not occasion Sickness or Gripings during its Operation, and what is also a considerable thing in its Favour is, that it is insipid to the Taste. It was greatly celebrated when first brought into *Europe*, but soon after Jalap being discover'd, the brisker Operation of that Root, and the smaller Dose necessary to be given, soon brought it into Use in its Place. *Mechoacan* is however recommended by many in Preference to Jalap in all chronic Cases, when Obstructions of the Viscera are suspected to be in the Case; upon the whole, it is a Reproach to us to have suffer'd this Drug to get into Disuse as it has done of late Years, since there is not a better Purgative in all the *Materia Medica*, scarce any one liable to so few Accidents; the great Objection to it is the Quantity necessary for a Dose, which is from one to two Drams.

It has been made an Ingredient in many officinal Compositions, but it is so little used at present, that it is scarce to be met with in the Shops.

C H A P T E R VI.

HELLEBORUS ALBUS,
White Hellebore.

WH I T E H E L L E B O R E is a Root so extremely different from that distinguish'd by the same Name with the contrary Epithet of black, that one would wonder how the same common Term of Hellebore came to be attributed to both of them.

White Hellebore is a Root naturally cover'd with a vast Quantity of Fibres. It is of an oblong and somewhat tuberous Figure, and its general Size is an Inch or two in Length, and about three quarters of an Inch in Diameter. Its Surface is extremely rough and uneven, being deeply furrow'd, and often cover'd toward the top with scaly or flaky Membranes. It is of a moderately firm and compact Structure, not very heavy, nor extremely hard. It cuts tolerably easy with a Knife, and leaves a smooth but not very glossy Surface. Its Colour on the outside is a deep dusky brown, but when broken it appears of a whitish Hue; its Fibres are moderately thick and very numerous, and are of a paler Colour than the rest of the Root. It has very little Smell, but has an acrid, bitterish, subastrigent, and extremely nauseous Taste.

White Hellebore is to be chosen in large and fair Roots, plump, full, and not too much wrinkled on the Surface, not too easily broken, and not appearing dusty when broken, for these are Marks of Decay: it should be clear'd from the Fibres before it is used, as they have much less Virtue than the Body of the Root.

White Hellebore was a Drug perfectly well known both to the antient *Greeks* and *Romans*, as was also the Black Hellebore, but we have much to complain of in the Imperfection of the Descriptions, the Generality of them have left us of the Plants which produced them; and consequently can hardly be certain of our having the same Roots that they described under those Names. The Description *Dioscorides* however gives of the White Hellebore Plant indeed leaves us very little Room to doubt of our having the very same Root under this Name, tho' his Description of the Black Hellebore agrees but very badly with what we have under that Name. The

The Plant which produces our white Hellebore, which we may pretty safely affirm to be the same with that of the Ancients, is one of the *Polygamia Monœcia* of *Linnaeus*, and one of the *Herbæ multiflorosæ sive corniculatæ* of *Mr. Ray*. It is kept frequently with us in the Gardens of the Curious under the Name of white Hellebore, and is described by Authors in general under that of *Veratrum flore sub viridi*, and *Helleborus albus flore ex viridi albescente*. The Root is yellowish while in the Earth, and full of Juice; the Stalk grows to two or three Feet high; the Leaves are broad and very highly ribbed in the Manner of those of Plantain, and from the middle of the Stalk to the Top the Flowers stand very thick on it; they are small and of a pale whitish Colour, with more or less green in it. The Fruit which succeeds these is composed of three flat Seed Vessels joined together; these are half an Inch long, and contain Seeds of an oblong Figure, whitish, and resembling Grains of Wheat, but margined and surrounded as it were with a foliaceous Wing.

The Roots of white Hellebore yield, on a chemical Analysis, a spirituous Liquor of a very acrid Taste, which coagulates a Solution of corrosive Sublimate: after this comes an acid and very sharp Liquor, and then a volatile Salt in a concreted Form, and a moderate Quantity of an essential Oil; after all these are separated, the remaining Earth, or *Caput mortuum*, is more in Proportion than that of almost any other Root we are acquainted with, being nearly a third Part of the Weight of the Root used. An Infusion of white Hellebore Root in Water, makes the Colour of the deep blue Paper much brighter than before on dipping into it, and has exactly the same Effect upon it that Lime Water has.

An Oil may be made *per Descensum*, either from the black or white Hellebore, which will prove a very valuable Purge; it is to be made in the usual Way by that Process, and afterwards rectified by distilling in a Retort from Wood Ashes, or from the Ashes of more Hellebore, till it have lost all the empyreumatic Smell. It is then to be digested with Oil of Cinnamon, or of Anise Seed, and afterwards set by for Use; its Dose is from six to twelve Drops.

White Hellebore given in Powder or in Infusion is a very rough Vomit, and at present is never administered as such; the Ancients used it in this Intention, but that never, but when very desperate Diseases called for such a violent Remedy. It is a powerful Sternutatory, and is sometimes used as such in soporose Diseases; but the principal Use made of it at present is externally, in Unguents for the Itch, among the common People.

CHAPTER VII.

HELLEBORUS NIGER,
Black Hellebore.

BLACK Hellebore is a Root consisting principally of long and tolerably thick Fibres. It is composed of a tuberous Button or Head, which is seldom much larger than a small Walnut, often not so big as a Nutmeg; this is of a dusky black Colour, and of a wrinkled Surface. From this there issue a Multitude of Fibres or Filaments, which are two, three, or more Inches long; of a roundish Figure, but usually somewhat twisted in the drying; of a tolerable

ble smooth Surface, and of a black Colour on the Surface, but white within, and about the Thickness of a Packthread. The whole Root is light, and of a lax Texture, easily cut, and as easily powdered when not damp. When fresh, it has a pungent and acrid Smell, and a very disagreeable Taste; in which there is a Mixture of bitter, acrid, and mawkish, which gives an Inclination to vomit, even as soon almost as it is taken into the Mouth.

Black Hellebore is to be chosen in large and fair Roots, not too light; firm, not friable, and of a strong Smell. When it has lost its Smell, or is brittle and dusty, it has no longer the Virtues it possesses in a more perfect State. Black Hellebore is a Root very subject to Sophistication; we frequently meet with other Roots sold in its Place; among these are the Roots of the wild black Hellebore, or *Helleboraster niger flore viridi*. These are smaller in the tuberous Part, and have thicker Fibres than the true black Hellebore, and also those of the Plant called by some Authors *Helleborus niger tenuifolius Buphthalmi flore*; these are distinguished by the Roots being almost entirely fibrous, and the Fibres less black on the Surface, much tougher than those of the true black Hellebore, and of a greyish or yellowish white within, not of the pure white of the genuine Kind. These are to be carefully distinguished from the genuine Root, the former of them being a much more violent Purge than it, and the latter not purgative at all.

The Plant which produces the true black Hellebore is one of the *Polyandria Polygynia* of *Linnaeus*, and of the *Herbæ multifloræ sive corniculatæ* of Mr. Ray, and is described by *Caspar Bauhine* under the Name of *Helleborus niger flore roseo*, and by others under that of *Helleborus niger verus*, or *legitimus*. It is a low Plant, the Stalks which support the Leaves rising from the Root are about five or six Inches long, the Leaves are deeply divided into nine Parts, more or less, which stand like Fingers. The Flowers stand on naked Stalks, five or six Inches long, and are very large and beautiful, composed of five Petals, which are white at first, then purplish, and finally greenish, and have no Cup. These are succeeded by several Capsules arranged together into a Head, and containing the Seeds.

Black Hellebore was known among the Physicians, in all Ages that we have any Account of. *Dioscorides* and *Theophrastus* are familiar with it; they call it *Melampodium*; which Name, they tell us, it had from one *Melampo*, the first Man in their Histories who used it, or who invented Purging as a Cure for Diseases, and who cured *Prætus's* mad Daughters with it. Though we find the *Greeks* familiar with the Names of *Melampodium* and *Helleborus*, we are left a little in the dark, as to their Hellebore being the same with ours. *Theophrastus* gives so imperfect a Description of both the Hellebores, that it is not easy to know what he means. And even *Dioscorides*, whose Account of the white Hellebore is a very accurate one, and perfectly agrees with ours, yet gives us a Description of the black, that leaves us much in the dark about it. His Description of the Root indeed agrees with ours; he says it was black, and consisted of a Button or tuberous Knob, from which there hung a vast Number of Filaments. This perfectly agrees with our black Hellebore; but he tells us that the Plant arising from this Root had Leaves like those of the *Plantanus*, but smaller, rough, and more divided; that the Stalk was rough, and the Flowers white or purplish, and standing in Clusters. It is evident from this, either that *Dioscorides* was misinformed about the Plant,

or that the Text is corrupted in this Place ; or finally, that he meant something else, and not our black Hellebore, and consequently that the black Hellebore of the Ancients is lost to us ; but this last seems the least probable Conjecture. *Tournefort* has described another Species of black Hellebore, which he found in the very Places whence the Ancients had theirs. He calls it *Helleborus niger Orientalis Caule præalto amplissimo folio, flore purpurascens*. He supposes this may have been the true black Hellebore of the Ancients ; but though the Roots resemble ours in Shape, yet that they are larger ; the Description of the Plant agrees no better with that of *Dioscorides* of their black Hellebore, than that of ours does. The Roots of this Kind of Hellebore are very bitter, but not at all acrid ; and there seems no farther Foundation for supposing it the true black Hellebore of the Ancients preferably to ours, but that very vague one of its being found where they said theirs was met with in greatest Abundance. And there seems great Reason from the Description, Figure, and Qualities of our black Hellebore, to suppose it is the very Kind mentioned by *Hippocrates* and all the old *Greeks*, but that by some Accident there is an Error in *Dioscorides*'s Description of the Plant.

Five Pounds of black Hellebore Root, chemically analysed, will yield eight Ounces of a greenish Liquor of a very acrid Taste, but which makes no Change in Syrup of Violets, or in a Solution of corrosive Sublimate ; after this Liquor there come over two Pounds, thirteen Ounces, and six Drams of a Liquor, which, by Degrees, from green becomes colourless, and from its acrid, changes to an austere and styptic Taste, with a remarkable Acidity ; this turns Syrup of Violets red. The foetid Oil that follows these will be an Ounce and half in Quantity, and the *Caput mortuum* ten Ounces, out of which six Drams of a lixivial Salt may be prepared, and there will remain somewhat more than two Ounces of *Caput mortuum*. Blue Paper dipped in an Infusion of black Hellebore, comes out not of a brighter, but rather of a darker and bluer Colour than before. It appears from the Analysis of the Roots of the true Hellebore, that an Alkali Salt predominates in the white, but that an Acid is the more manifest and more powerful in the black.

Black Hellebore is a Purge but not a very easy one. It is sometimes given in Substance from ten Grains to twenty ; in which Dose, unless the Root be decayed, it operates very briskly ; it is sometimes also given as a Purge in Infusion. In Tincture it is principally prescribed as an Alterative for attenuating the Humours ; it has been always famous in maniac Cases, and is still given in them, though rather as an Alterative than Purge. The purging with Hellebore however seems to have been coeval with the Practice of Physic. *Hippocrates* makes frequent Mention of it, and seems to have given the white as well as the black. They used many Correctives for these violent Medicines, and that they might be sure of the Patient's having them genuine, often sent him to the Place, whence the Plants grew. At present the Use of black Hellebore as a Purge is almost out of Doors, the chemical Preparations of Antimony and Mercury having been found so much more certain, and so well to answer all its Purposes. *Tournefort* tried the Extract of the *Oriental* black Hellebore, which he supposed to be the true Kind used by the Ancients ; and which from its Want of the acrid Taste of ours, he judged to be milder in its Operation ; but he found it even when given

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in such Doses as not to purge too violently, a very troublesome Medicine, bringing on Nauseas, Pains in the Stomach, and many Signs of Inflammation, which even shew'd themselves in the Throat, and about the Arms.

Upon the whole, the Antients, who knew nothing of many of our stronger Purges, might be glad of this, disagreeable and rough as it was; but there seems Reason to disregard it in this Intention at present, as we have so many more eligible Medicines. We at present only use it as an Alterative, and the only Preparation of it kept in the Shops, is a Tincture which, in the late *London Dispensatory*, is ordered to be made by infusing four Ounces of the Root with two Scruples of Cochineal in a Quart of Proof Spirit, till it has obtained a strong Tincture from it in a Sand-heat. The Dose of this is from fifteen to fifty Drops. It is given in hysteric Cases, and in all Diseases arising from Obstructions of the Viscera.

CHAPTER VIII.

IPECACUANHA, *Vomiting Indian Root.*

THERE are two Kinds of *Ipecacuanha* distinguished by their Colour, and brought from different Places, but both possessing the same Virtues tho' in a different Degree; the one of these is grey, and is brought from *Peru*; the other is brown, and is brought from the *Brasils*.

Authors mention also what they call a third Kind of *Ipecacuanha*, and Drug-gifts sometimes sell it also under the Name of white *Ipecacuanha*; but this does not possess the Virtues of the others, nor is properly of the same Kind. The grey is principally used.

The grey, or *Peruvian Ipecacuanha*, is a small and irregularly contorted and twisted Root; it is of the Thickness of a small Goose Quill, and is brought over to us in Pieces of one, two, three, or more Inches in Length, but these never strait, but variously turn'd and wreath'd in several Directions. It is of a rough Surface, and that in a very particular manner, being raised into a sort of annular Ridges, at small Distances from one another, running quite round the Root, and rising considerably about the rest of its Surface. It is of a dense and firm Texture: It is considerably hard, tho' not at all tough, but breaking when one attempts to bend it much: It is but moderately heavy, and does not cut easily through with a Knife: It is of a dusky greyish Colour on the Surface, and when broken appears of a clearer and paler grey, and discovers a tough and firm Nerve occupying its Centre, and always running its whole Length; this Nerve, or Fibre, is very small and slender, of a somewhat paler Colour than the rest, and is much more difficultly reduced to Powder; it is less resinous, and of less Virtue than the cortical Part: The whole Root is of a very peculiar Smell, somewhat pungent and not disagreeable; in Taste it is acrid and somewhat bitterish, and upon the whole very disagreeable.

The brown, or *Braslian Ipecacuanha*, is a Root much resembling the former in all its Characters, but it is, if any thing, more twisted and convoluted; its annular Ridges are higher raised than in that, and it is a smaller as well as shorter Root, very few Pieces of it much exceeding a Crow Quill in Thickness, or an Inch

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Inch and half in Length ; it is of a deep dusky brown, or blackish on the outside, and white when broken ; it is less acrid, and has more of the bitter to the Taste than the grey Kind, and has less Smell.

The grey *Ipecacuanha* ought to be chosen for medicinal Use preferably to the brown, though both are very excellent Medicines ; the only Difference between them is in their Degree of Strength, the brown being apt to operate more roughly. Which ever is chosen it must be hard, firm, and solid, clean, not dusty or friable, which are Signs of Decay. It is scarce liable to any Adulteration, except that with the Root call'd white *Ipecacuanha*, which is pretended by many, though falsely, to be of the same Virtues, and to be a Species of the *Ipecacuanha* ; this ought never to be bought under the Name of this Drug, and is to be carefully separated when any of it is found among either of the other Kinds : It easily discovers itself by its want of the annular Wrinkles of the true *Ipecacuanha* : It is a slender woody Root, of a yellowish white Colour, and smooth Surface, and has nothing of the bitterish Taste of the *Ipecacuanha*. There are People who pretend that this is the white *Ipecacuanha* described by *Piso*, but this cannot be the Case ; the white *Ipecacuanha* of that Author is truly the grey *Peruvian* Kind above described, and this Root is no other than a Counterfeit mix'd among the true *Ipecacuanha* to adulterate it, and get Money by, and in Effect it is neither emetic nor cathartic.

Ipecacuanha, though one of the most valuable Drugs the *Materia Medica* affords us, was not only unknown to the Antients, but even to the modern World, till the Middle of the last Century. *Piso* and *Marcgrave* were the first who brought it out of *America* into *Europe* : It was celebrated at that Time as a Cure for Dysenteries, and got into Use for a few Years, but again sunk into Oblivion, and it was many Years before it got into the Reputation it now possesses. The *French* were the first People in *Europe* who attempted to introduce it, and they succeeded very ill with it at first, which was owing to their giving it in too large Doses. *Helvetius* was the Man who first gave it successfully among them, and the *French* King soon after purchased the Secret of him at a large Price, and communicated it to the World.

Both the grey and the brown *Ipecacuanha* are the Produce of *America* ; the grey is found in *Peru*, where it is call'd *Bexuguillo*, and *Rais de Ore* by the *Spaniards*, being found only about the Gold Mines ; the brown is frequent in the *Brasils* ; they are indifferently sent into all Parts of *Europe* under the general Name of *Ipecacuanha*.

The grey and the brown *Ipecacuanha* have been by some supposed to be the Roots of two different Plants, but this is erroneous ; they are the Roots of the same Species, only growing in different Places, and differ as the one grows in a richer and moister Soil, and is better supplied with Juices than the other, rather than any Way else.

The Plant which produces them is of the number of the *Herbæ bacciferae* or Berry bearing Plants of Mr. *Ray*. *Plukenet* and *Morison* have call'd it a *Periclymenum*, and *Linnaeus* has named it *Ouragoga*. It rises to six, eight, or ten Inches high, sometimes to more than a Foot ; the Stalks are slender and weak, and have no Leaves except near the Top, where there stand three or four, seldom more than five, and above these grow a few monopetalous Flowers, divided into five Segments at the Edges, which are succeeded by as many roundish umbilicated Berries,

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Berries, each containing three hard Seeds. The Root naturally extends to a great Length, creeping horizontally under the Surface of the Ground; the Stalks seldom stand erect, and the Leaves are oblong, swelling in the Middle and small at both Ends; they are about two Inches long, and an Inch and a half nearly in Breadth, sometimes larger; they are rough to the Touch, and somewhat paler on the under Side than on the upper. The Scarcity of Leaves on this Plant appears on all the Specimens we have seen of it. There are two in the late Lord *Petre's* glorious Collection, one in the Duke of *Richmond's*, and one I have; the Leaves on all four of which make but fourteen, tho' one of those of Lord *Petre's* has five. From these two it appears also, that the Plant is the same which produces the grey and the brown Kind, one of these having the true grey, and the other the true brown *Ipecacuanba* growing to it, as the Root and both Plants being absolutely the same.

The grey and brown *Ipecacuanba* are both of them so acrimonious, that the People employ'd to powder any Quantity of either, if they have not the Caution very carefully to avoid the Particles that rise in Dust from the Mortar, are often seiz'd immediately afterwards with a Difficulty of breathing, and spitting of Blood, and sometimes with Bleedings at the Nose, and great Swelling and Inflammation of the Face, Eyes, and Throat; these Symptoms generally go off in a Day or two of themselves, but if more than ordinary violent, it may be proper to bleed for them.

Ipecacuanba boil'd in Water gives it a mucilaginous Texture, and renders it so thick that it is not easily press'd through a coarse Cloth. A Pound of good *Ipecacuanba*, of the grey or *Peruvian* Kind, will yield by means of Spirit of Wine, if carefully manag'd, three Ounces of a pure Resin. *Geoffroy* makes the Quantity somewhat less than this, but I have made the Experiment. The brown yields much less Resin, two Ounces, or a very little more, being all that can be extracted from a Pound of it: Either of them will afterwards yield a much larger Quantity of a gummous Extract with Water, but the grey the greatest Quantity of this also. It should appear from this, that the active Principles of the *Ipecacuanba*, the Gum, and the Resin, are more abundant in the *Peruvian* Kind, than in the *Brasilian*, yet Experience shews the latter to be the stronger Emetic.

Ipecacuanba will keep good a great while. *Piso* says, it will, after some Years, cease to be emetic, but will still continue an Alexepharmic, Sudorific, and Astringent.

The Resin of *Ipecacuanba* is a more violent Emetic than the Root itself. The gummous Extract is scarce at all emetic, but it proves a good Astringent. The remaining Powder has no Virtues or Effect at all, if taken even in a large Dose. The Root itself in Powder however, is much better for all medicinal Purposes than any Preparation of it. It is an excellent, mild, and safe Emetic, and has in a manner banished all the other Medicines of that Intention out of Practice: It is also a noble Restringent, and given in Doses too small to vomit, is the greatest of all Remedies for a Dyfentery. It was this Virtue that was first discovered in it by the *Indians*, and for which the *French* King gave *Helvetius* his Reward for discovering or bringing into Use. Its Dose as an Emetic, is from six, or eight, to thirty Grains; and the best Way of taking it is in white Wine, in which it shall have stood four and twenty Hours first;
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in Dysenteries the Patient is first to take such Doses of it as will vomit him, and afterwards to continue the Use of it a long Time, at the Rate of three or four Grains in any Form twice a Day. Much smaller Doses of the Powder of *Ipecacuanba* than are usually given will vomit, but as the larger Quantities up to twenty-five or thirty Grains, are more certain of their Effect, and attended with no ill Consequence, it is best to give them.

Small Doses of *Ipecacuanba* are an excellent Remedy in Diarrhœas of a more simple Kind, as well as in Dysenteries; and in the *Fluor Albus* we hardly know a better Medicine. It has unfortunately been observed, that this Medicine does not succeed so well in the bloody Fluxes attending Camps and Hospitals, as in others; but it will succeed much better than any other Medicine in these if joined with the common Alexipharmics; and one great thing to be said in its Praise is, that there never was known any bad Effect from the Use of it. The Plant call'd *Ipecacuanba* by the People of *Virginia* is a Species of *Filipendula*.

CHAPTER IX.

Z E D O A R I A,
Zedoary.

ZE D O A R Y is a Root, the several Pieces of which differ so much from one another in Shape, that they have been divided into two Kinds, as if two different things, under the Name of *Zedoaria longa, et rotunda*, the long and round Zedoary; and some Authors have gone so far, as to suppose them the Roots of two several Species of Plants; this however is erroneous: The long and the round Zedoary are only the several Parts of the same Root.

The long Pieces of Zedoary are of a very singular Figure, they are not of the Nature of the common long Roots of Plants, but are themselves properly Tubera or Glandules, as well as the round ones, differing from them in nothing but their oblong Figure: They are two, three, or four Inches in Length, and of the Thickness of a Man's Finger; not large at one End and tapering away to the other, but thickest in the Middle, and growing gradually smaller to each End, where they terminate in an obtuse Point each Way: They are of a tolerably smooth Surface, except that they have some little Protuberances in several Parts, from which Fibres have originally grown: They are of a very close and compact Texture, considerably heavy, and very hard; they will not cut easily with a Knife; when cut they shew a fine, smooth, and glossy Surface: They are of a pale greyish Colour on the outside, with a faint Mixture of brown in it, and are of a dead whitish Hue within: They are not easily powder'd in the Mortar; their Smell is very remarkable while bruising, it is highly aromatic, and approaches somewhat to that of Camphire; they are of a very pungent, aromatic, and bitterish Taste.

The round Zedoary has all the same Characters with this, and differs only in Figure, being short and roundish, of the Size of a small Walnut, smooth on the Surface, except where the Bundles of Fibres have adhered, and generally running into a sharp Point at one End.

Zedoary is to be chosen fresh, sound, and hard, in large Pieces, it matters not as to Shape whether long or round, of a smooth Surface, and of a sort of fatty Appearance within, too hard to be bitten by the Teeth, and of the briskest Smell that may be; such as is friable, dusty, and Worm-eaten, is to be rejected.

The antient *Greeks* were wholly unacquainted with Zedoary, there is no mention of any such Drug in the Works of *Dioscorides* or *Galen*. The *Arabians* however were well acquainted with it, they mention it sometimes under the Name of Zedoary, and sometimes under that of Zerumbeth, and are so short in their Descriptions, and so at Variance among one another, that it is not easy to ascertain their Meaning as to the Distinction, if they originally meant any, between the Substances express'd by these two Names.

Serapio and *Rhazes* use the Words *Zedoaria* and *Zerumbeth* as synonymous, and declare both to mean only the same Root. *Avicenna* on the contrary distinguishes the Zedoary, and Zerumbeth, and even talks of two Kinds of Zedoary. Others of them make the Zarnab they speak of, different both from the Zedoary and Zerumbeth; but *Serapio*, an Author as much to be depended upon for his Accuracy as any of them, declares Zedoary, Zerumbeth, and Zarnab, all to be the same Thing.

Zedoary, both of the long and the round Kind, is brought to us from *China*, and we find by the *Arabians*, that they had it also from the same Place. The round Tubera are less frequent than the long, and some have therefore supposed them the Produce of a different and more rare Plant; but this is not so probable as that the general Form of the Root is long, and the round Tubera are only *lusus Naturæ* and less frequent in it.

The Plant which produces it is one of the Class of the *Herbæ bulbosæ affines* of Mr. Ray. It is described in the *Hortus Malabaricus* under the Name of the *Malankua*. Those who are of Opinion that the Zerumbeth was a different Thing from Zedoary, suppose that Authors meant, under that Name, the Root of another Plant of the same Class, described in the *Hortus Malabaricus* under the Name of *Kua*, and by *Herman* in his *Musæum Zeylanicum* by the Name of *Walingburn*. This is the Zerumbeth of *Garcias* next to be mentioned, but we scarce ever see the Root of this Plant imported, nor is there any sound Reason for supposing that any of the old Authors ever meant it by that Name.

Zedoary, distill'd with common Water, affords a thick and dense essential Oil, which soon concretes of itself into a kind of Camphire, and on this Oil its Virtues principally depend. It is a Sudorific, and is much recommended by some in Fevers, especially of the malignant Kinds. It is also given with Success as an Expectorant in all Disorders of the Breast, arising from a tough Phlegm, which it powerfully incides and attenuates; it is also good against Flatulencies, and in the Cholic; it strengthens the Stomach and assists Digestion; and finally, is given with Success in nervous Cases of all Kinds. It is not an Ingredient in any of our Shop Compositions. It was in the *Philonium Romanum* of the late *London Dispensatory*, but it is now omitted in the *Philonium Londinense* of this: In extemporaneous Prescription it is seldom given singly, but is a common Ingredient in restorative Powders, and Infusions. Its Dose is from five to fifteen Grains in Powder, and from a Dram to two Drams to the Pint in Infusion.

CHAPTER X.

ZERUMBETH.

TH E Zerumbeth of the Shops, consider'd as a distinct Root from Zedoary, which was indeed the Root understood by the oldest Authors, who treat of it under that Name, is the Zerumbeth of *Garcias*, or the Root of the *Walingburn*. It is a Root very different from Zedoary in Shape and Size: It is of an oblong, but irregular Figure, and is met with in Pieces of more than a Foot long, and of three Inches or more in Diameter; such however are rare; and its more usual Standard may be allowed to be about four or five Inches in Length, and about the Thickness of a Man's Thumb. It is not strait or regular, but variously contorted, and bent, and jointed as it were. Its Surface is a little uneven, and it is usually much thinner in some Parts than in others, rising into Knobs or *Tubera*. It is of a close and dense Texture, and yet not very heavy: It is considerably hard; it will not be easily cut through with a Knife, but when cut, it shews a very smooth and glossy Surface. It is of a pale greyish Colour with a Cast of the yellowish on the outside, and whiter within. It does not powder easily; its Smell is very aromatic and agreeable, and its Taste very acrid, scarce less so than Ginger, but aromatic in a high Degree withal, and somewhat bitterish.

It is so rarely met with in our Shops, that there is no Reason to fear its being adulterated: When it is found as to the Choice, it should be firm, fresh, and sound, not dusty nor worm-eaten; and the most acrid to the Taste is the best. It is but very lately known as a Medicine, and does not seem in a Way ever to come into Use. *Garcias*, *Piso*, and *Marcgrave* describe it, and speak largely of its Virtues. It is found both in the *East* and *West Indies*, and might be imported in sufficient Quantities for any Demand, if the present Practice regarded it.

The Plant which produces it is one of the *Herbæ bulbosis affines* of Mr. Ray. *Herman* has described it under the Name of *Zinziber latifolium sylvestre*, the broad leaved wild Ginger, and *Piso* and *Marcgrave* under that of *Paco-Ceroca*, and Sir *Hans Sloane* under that of *Zinziber sylvestre majus Fructu in Pediculo singulari*. The Leaves are large, and like those of the *Cannacori*, the Stalks five or six Feet high; but these are only formed of Leaves, convoluted and wrapped round one another at their Bases. The Stalks which produce the Flowers grow from the same Roots with these, and often close by them; they are a Foot or little more in Height, and on these the Flowers grow in Spikes; they are tubular and of a beautiful red. The Plant grows in wet Places, and by the Sides of Rivers; and the People of St. Vincent's Island, where it is very common, make a Colour from its Flowers, which gives a fine violet Tinge to Silks or Linens, and stands very well. It agrees very much with Zedoary in its Principles and Virtues; it abounds in a volatile, oily, aromatic Salt. Distilled with Water, it yields a most fragrant Oil, on which when newly made, there is always seen a Kind of volatile Salt in Form of Flakes of Snow, and much resembling Camphire.

It is good in nervous Cases, and on all other Occasions on which Zedoary is.

C H A P.

CHAPTER XI.

CASSUMUNIAR.

CASSUMUNIAR is a Root in some Degree approaching to the Nature of Zedoary, but differing from it in many essential Particulars, and produced by another Species of Plant. It is a moderately large Root; we usually meet with it cut into Slices for the Sake of drying; but when brought over whole, it is met with of three, four, or five Inches in Length, and near an Inch in Thickness, though many Pieces of it are smaller. It is of a tuberos and irregular Shape, not strait and even, but bent and jointed, or knotted. Its Surface is somewhat wrinkled, and is marked at certain Distances, with a Sort of prominent Circles or Rings which surround it, and rise above the rest of the Surface. It is of a very close and compact Texture, and is very hard and heavy. It will not cut through freely with a Knife, nor be easily powdered in a Mortar. When cut it shews a very smooth and shining Surface; it is of a dirty greyish white with some faint Admixture of a yellowish Tinge on the outside, and when broken is found to be much yellower within. It is of a very brisk, fragrant, and aromatic Smell, and of an acrid, pungent, and aromatic Taste, much resembling that of Zedoary, but that it has a little more Bitterness.

Cassumuniar is to be chosen in large firm Pieces, as plump and full as can be, and such as is of the most fragrant Smell and most acrid Taste. It is hardly liable to any Adulteration, except that of putting Pieces of the long Zedoary among it, and this is easily discovered by the different Figure of the Roots, and their Colour when broken, and such Pieces are easily separated from it.

Cassumuniar was not at all known to the Ancients, and its Use indeed has been in a Manner peculiar to *England*, since the Discovery of it. We have it from *Java*, *Malabar*, and some other Parts of the *East Indies*. The Plant which produces it is one of the *Herbæ bulbosæ affines* of Mr. Ray. It is called by some *Risegon*, and is described by *Breynius* in his *Prodromus*, under the Name of *Zedoaria Radice lutea*, the yellow rooted Zedoary. It abounds like the Zedoary in a volatile, oily, aromatic Salt, and if distilled in the common Way in an Alembic, yields a very fragrant Water, of a bitterish, but not disagreeable Taste, on which there swims a large Quantity of a yellow Oil, which like that of the Zedoary will in Time concrete into a solid Form, and much resembles Camphire. A Pound of good Cassumuniar will yield near a Dram and half of this Oil. It is a Cardiac and Sudorific, and is a very famous Medicine in nervous Cases. It is also given as a Stomachic and Carminative with Success. It is not an Ingredient in any of our officinal Compositions, but is often prescribed in Powders, Bolusses, and Infusions, among other aromatic and stomachic Medicines. Its Dose in Powder is from five to fifteen Grains; in Infusion the common Proportion is a Dram, or a Dram and half to the Pint.

CHAPTER XII.

ZINZIBER,
Ginger.

GINGER is a Root too well known to need a long Description: It will be sufficient to observe that it is of the tuberous Kind, not strait and even, but knotty, crooked, and irregular, and divaricated into many Branches; all of which have Protuberances on their Surface in different Parts, and are not round as the Generality of Bodies of this Kind, but somewhat flattened. They are of a pale yellowish Colour when broken, and are like the *Contraceptiva* of a fibrous Structure, and easily beat into a Sort of woolly or long thready Matter. They are of a very hot, acrid, and pungent Taste, though aromatic withal, and of a very agreeable Smell.

Ginger is too cheap to leave any Fear of its being sophisticated, and too well known to need any Directions about the Choice of it; we may only observe that the hardest and firmest Pieces are the best.

Ginger has been known in the earliest Times we have any account of: *Theophrastus* mentions it, and *Dioscorides*, *Galen*, *Pliny* and the rest shew us, that they were perfectly well acquainted with it. We receive it at this Time from the *East* and *West Indies*; *China* produces vast Quantities of it, and the Isle of *Ceylon* is full of it. The *Oriental* is much superior to the *American* in its Flavour, and is of a firmer Substance than the other, and does not beat out so much into Threads.

The Plant which affords us the Ginger, is of the Number of the *Monandria Monogynia* of *Linnaeus*, and of the *Herbæ bulbosæ affines* of Mr. Ray. *Plukenet* has described it under the Name of *Zinziber angustiore folio fascina utriusque Indiæ alumna*, the narrow leaved female Ginger common to both the *Indies*, *Piso* under that of *Mongeratia*, and *Bontius* under that of *Gingibil*. It has two Kinds of Stalks, the one Sort bearing only Leaves, or in a Manner made up of Leaves indeed, closely wound round about one another at the Base; these grow a Foot or two in Height, and their Leaves are like those of Reeds: The other Kind of Stalks produce the Flowers; these do not rise to more than ten or twelve Inches in Height; they are terminated by a Kind of Ear of very beautiful Colours, and formed of membranaceous *Squammeæ*, among which the Flowers stand: These resemble in some Degree those of our Orchis's, and are mottled with red, and white, and yellow. These are succeeded by Capsules, each divided into three Cells, and containing a large Quantity of small roundish Seeds. There is another Plant of this Genus, called by *Piso* and others, *Zinziber mas*, the male Ginger, and by the *Indians*, *Anchoas*, and *Katon-inselis-Kua*, described by *Hernandez* in the *Hortus Malabaricus*. This differs very little in Appearance from the former common Kind; the Leaves are broader indeed, and the Roots are larger and thicker, but they are less hot and aromatic, and therefore are much less valued.

The *Indians* are very fond of Ginger, they eat both the young Shoots of the Leaves, and the Roots themselves, cut small in their Sallads and Broths; and they make an excellent Sweetmeat of them preserving them with Sugar.

Ginger abounds greatly with a volatile oily Salt; distilled by the Alembic, it yields a considerable Quantity of an essential Oil, of an intolerable Heat and Pungency, but less aromatic than might be expected.

Ginger is an excellent Carminative and Stomachic; it assists Digestion, dispels Flatus's, and takes off cholicky Pains often almost instantaneously. It is also highly esteemed by some as a Cephalic, and is particularly said to strengthen the Memory. It is often used as a Corrective to purging Medicines, and has the Credit of being a great Provocative to Venery, especially in the preserved State. It may be given in Powder from two or three to ten, twelve, or fifteen Grains; but it is seldom given in so large Doses on Account of its Acrimony. It is used in Decoctions from a Dram to two or three to the Quart. It is an Ingredient in the *Venice Treacle*, *Mithridate* and *Diascordium*, and in many other of the Compositions of the Shops, and is very frequently used in carminative and stomachic Powders in extemporaneous Prescription.

CHAPTER XIII.

ACORUS,
Acorus Root.

WE are to observe that there are no less than three distinct Roots belonging to different Plants kept in the Shops under the Name of *Acorus*; the one the *Acorus verus*, or true *Acorus*, a second the *Acorus Indicus*, or *Indian Acorus*, and the third the *Acorus Adulterinus*, or *Pseudoacorus*, the bastard *Acorus*, called also by some *Acorus vulgaris*. This last Term has occasioned some Confusion, having been understood by some to mean the *Pseudoacorus*, and by others the *Acorus verus*. And we are to add, that not a little more Confusion has been brought into the World, by the calling the true *Acorus* by the Name of *Calamus Aromaticus*, not only a very absurd and improper one, but one which of Right belongs to another Drug. Of the true *Calamus Aromaticus*, which is not a Root, but the Stalk of a Plant, we have spoken in its Place; of the other three in their Order here.

ACORUS VERUS,
The true Acorus Root.

The true *Acorus* Root, commonly called *Calamus Aromaticus* in the Shops, from the Custom of the later *Greeks*, is a Root of an oblong Form: We usually meet with it in Pieces of four or five Inches long, and of the Thickness of a Finger or something more. It is of a very irregular Figure, not tapering from one End to the other, but of an equal Thickness in every Part, and bent and contorted various Ways. It is not rounded as most other Roots are, but flat, and is full of little Protuberances as big as Pins Heads or a little more. Its Surface between these Protuberances is very smooth; it is of a fungous or spongy Texture, and very light, and is so soft that it cuts tolerably easy through with a Knife, and yet leaves a glossy Surface where the Instrument that divides it has passed. It is of a pale whitish Colour, with a Mixture of green in it while fresh, and of a yellowish or reddish white, on the Surface, when dried. Within it is of a more pure white, but still with some Cast of reddish; it
does

does not powder easily unless very thoroughly dried first. Its Smell is somewhat pungent, but very fragrant and aromatic, and its Taste acrid and somewhat bitterish, but very pleasant in its general Flavour.

Acorus is to be chosen full, plump, and new, with a smooth Surface, firm, but not tough, and of a fragrant Smell. It is apt to grow insipid with keeping long, and such is to be rejected. It also sometimes grows rancid and mouldy, by being kept in too damp a Place, after which it never recovers its original Fragrancy and Virtue. The *Acorus* is brought to us from *Germany*; it was well known to the ancient *Greeks*, who called it as we do *Acorus*, though the later Writers of that Denomination gave it that of *Calamus Aromaticus*, a Term used by *Dioscorides* as frequently as the Word *Acorus*, but by him attributed to a very different Substance, properly a *Calamus* or Reed, not a Root. The *Arabians* who interpreted the Writings of *Dioscorides* have rendered the Word *Acorus* by *Ugi*, or *Vegi*, but they seem to have greatly mistaken the Substance; for *Avicenna* says that the *Ugi* was of a very rank and disagreeable Smell. In *Pliny's* Time the Term *Acorus* was not only used to express the Root of the true *Acorus*, but that of the *Oxymyrsine* was also understood by it, and called by some *Acoron Agrion*.

The Plant which produces the true *Acorus* Root is one of the *Hexandria Monogynia* of *Linnaeus*, and one of the *Herbæ graminifolæ, non culmiferæ flore stamineo* of Mr. *Ray*. Its Roots creep and spread several Ways under the Surface of the Earth; its Leaves are very long, narrow, and of the Shape of the Grass, or of the narrow leaved Iris. They are smooth, flat, sharp pointed, and of a lively green Colour, and are of an aromatic Smell when rubbed between the Fingers. The Flowers are of the stameneous Kind, having no Petals, and are collected together into a large oblong Head of a very firm Texture, an Inch or two in Length, and half an Inch in Thickness, and of a brown Colour. We have the Plant in *England* in considerable Plenty, though few have thought of drying its Roots for Use; among these however we are not to forget Mr. *Blackstone* an Apothecary, and a very accomplished Botanist, who five or six Years ago discovered the Plant near *Harefield* in *Buckinghamshire*, and took up a great Quantity of its Roots, which, when dried, were equal to any brought from abroad.

Acorus Root, distilled in a Retort, yields a very large Quantity of an essential Oil, and some Portion of a volatile urinous Spirit. From the Combination of these it is easy to conceive that the Root may have very considerable Virtues.

Dioscorides, who (notwithstanding all the Errors of *Brassavolus* and *Fuchsius*, who supposed he meant the greater or the lesser Galangal by that Name, and others who supposed he called the *Pseudoacorus* or Root of the common Flag Flower by it) really meant the same Thing by the Word *Acorus* that we do, ascribes to it the Virtues of a Diuretic and Attenuant, and recommends it against Obstructions of the *Viscera*. At present it is used as a Cordial, Stomachic, and Carminative, and for opening Obstructions of the Spleen and *Uterus*, and promoting the *Menses*.

It is sometimes given in Substance, but rarely alone; the more general Method of prescribing it is in Infusion among other Ingredients, in which Case the usual Proportion is, from one Dram to three of the Root to a Pint of

Water. Its Dose in Powder is from five Grains to a Scruple. It has been an Ingredient in many of the officinal Compositions of our former Dispensatories, but it is at present less used.

ACORUS INDICUS,

Indian Acorus.

The Root call'd in the Shops *Acorus Indicus*, and *Asiaticus*, is to be carefully distinguished from the *Calamus Indicus*, or *Aromaticus*, properly so call'd, that is a Stalk of the Reed Kind. This is a Root very much approaching in its Figure and Qualities to the true *Acorus* before described. It is an oblong and irregularly shap'd Root, somewhat flattened, and very variously bent and contorted; we usually meet with it in long and slender Pieces, four, five, or more Inches in Length, and at the utmost scarce of the Thickness of the little Finger; and these frequently have been clear'd of their outer Bark before they are brought to us, though even in that Case they are not wholly free from those little Protuberances, which are so frequent on the true *Acorus*. These Roots, when entire, are of a much whiter Colour however than our *Acorus*; they are of the same lax and spongy Structure within, and are very light, and not hard, but easily cut through with a Knife, and have less redness as well within as on the Surface; they have a more fragrant and aromatic Smell than our *Acorus*, and are more acrid and pungent to the Taste, though their Flavour is truly of the same Kind.

Their principal Difference from the common *Acorus* is in this and in their being slenderer and whiter, but this is so obvious a Distinction, that they cannot easily be confounded with one another. The *Indian Acorus* is to be chosen new, plump, and sound, and not tough or friable, the one Extream shews it to have been kept too damp, and the other too long, for when it grows brittle it is decaying.

This is a Root but lately introduced into Medicine, the Antients seem to have been wholly unacquainted with it; at present it is better known in the *German* Shops than in ours. It is sent to *Europe* both from the *East* and *West-Indies*. The Plant it is produced by is of the same Genus with the common *Acorus*, and is described by *Piso* and others, who have treated as well of the *Oriental* as *American* Plants. It is described by *Herman* under the Name of *Acorus Asiaticus radice tenuiore*, and by the *Ceylanese* is call'd *Vazabu* and *Va Embu*, under which Name it is described in the *Hortus Malabaricus*. It is of the same Virtues with the common *Acorus*, but as it is more fragrant, and seems to possess them in a more exalted Degree, it is pity we do not get it more into Use than it is at present.

ACORUS ADULTERINUS,

Bastard Acorus.

This Root, which is sometimes call'd also *Acorus vulgaris*, and by that means confounded with the true *Acorus*, is a very different one from the two others, and is indeed the Root of a Plant of a different Genus. We are very sensible that the term *Acorus vulgaris* is in some Prescriptions truly meant to express this Root, but we could wish it may be no more used so, since if it be a Phrase of any determinate Signification at all, it ought to express our common true *Acorus*, by way of Distinction from the *Asiatic*, or *Indian* Kind; and that the true Name of this Root, which with those who will have the Word *Acorus* a

Part of it, is *Acorus adulterinus*, or *Pseudoacorus* may be used only for it. It is not easy indeed to imagine how the term *Acorus* came apply'd in any Sense to this Root, as it is neither in Figure, Colour, nor any of its Qualities like the *Acorus*: The utmost Resemblance between them seems to be, that they both have long Leaves rising from them, and both grow in watery Places.

The *Acorus Adulterinus*, or *Pseudoacorus*. is a thick, irregularly shap'd, and large Root: It is usually met with in the Shops in oblong Pieces, variously crooked, and contorted, and full of Protuberances of three or four Inches or more in Length, and of an Inch or more in Thickness; its Surface is rough and wrinkled, it is of a very lax and spongy Texture, and is very light; it is moderately hard, but may be cut through with a Knife, and exhibits a smooth and somewhat glossy Surface where fresh cut; in Colour it is a dusky reddish brown, both within and without; it has no Smell, and when first taken into the Mouth it seems to have no Taste neither, but after being held some time in it, it is found to have a considerable Acrimony. It is to be chosen in large and sound Pieces, plump and full, not too light, hard to break, and of a good reddish Colour.

This Root got Footing in the World as a Medicine through the Ignorance of the Druggists of some Ages ago, who knew so little either of Botany, or of their own more immediate Business, that they sold it constantly under the Name of the true *Acorus*. It is not indeed without its Virtues, but as they are not at all of the same Kind with those of the true *Acorus*, it was worse to sell it in the Place of that Root, than even if it had possessed none at all.

The Plant which produces the *Pseudoacorus* Root is of the number of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ bulbosæ affines* of Mr. Ray. It is described by all the botanical Writers under the Name of the *Iris vulgaris lutea*, and is commonly known among us by the Name of the yellow Flag Flower, or yellow Water Iris: It is extremely common in our Ditches, where the Roots are collected for the Use of the Shops, though of late they are less frequently found there, than while the Ignorance of the true *Acorus* gave them a Place there under its Name. It is a good Astringent, and has been given with Success to stop Diarrhoeas, and even Dysenteries, and to suppress and guard against Returns of Hæmorrhages of all Kinds. When the true *Acorus* was prescribed as a Deobstruent, and Promoter of the Menstrues, how unhappy an Error was the giving this Root in its Place? The common People in *Scotland* make a kind of Ink of the Juice of the Root of this Plant, as we do of a Decoction of Galls.

CHAPTER XIV.

G A L A N G A, *Galangals.*

THERE are two Roots described by Authors, and kept in the Shops, under the Name of *Galangals*, a greater and a smaller; of these however the smaller is much the most in Esteem, and is almost the only Kind ever heard of in Prescription. The *Galanga minor*, or lesser Galangal, is a small and short Root, of an irregular Figure, of the Thickness of a Man's little Finger,

and is seldom met with in Pieces of more than an Inch or two long; it is not strait, but variously bent and contorted, and is as it were jointed, having several Protuberances at its Ends, and on other Parts of its Surface; and being surrounded with a great many circular Rings, that stand out a little beyond the rest of the Surface. It is sometimes simple, but often also it is divided into a number of Branches, and its Surface between the Rings is somewhat wrinkled; it is of an extremely firm and compact Texture, yet not heavy; it cuts very difficultly with a Knife, and leaves a polish'd Surface; its Colour is a brownish red on the outside, and a somewhat brighter and fairer red within, though still not without a considerable Mixture of the brown with it. It is very difficultly powdered in the Mortar; it has no very remarkable Smell, but an extremely hot and pungent Taste, burning the Mouth in the manner of Pepper or Ginger, only much more lasting in its Effect than either, and has something of a Bitterness with the Heat.

The small Galangals are to be chosen full and plump, and of a bright Colour, very firm and sound, and of an acrid and insupportably hot Taste. There is no great Fear of Adulteration of this Root, otherwise than by the larger Galangal being mix'd among it; but this is easily discover'd by that Root's being much thicker, and of a deader Colour, and less pungent to the Taste.

The larger Galangal, or *Galanga major*, is brought to us in Pieces of two Inches or a little more in Length, and of near an Inch in Thickness: Its Surface is less unequal and tuberos than that of the smaller Kind, but is far from being smooth; it is considerably firm and hard, and cuts difficultly; its Colour on the outside is brown, with a very faint Cast of red in it, and within it is of a paler Colour, but with no more Redness; it has scarce any Smell, and has a disagreeable but much less acrid and pungent Taste than the smaller Kind. It is to be chosen in the largest, soundest, and heaviest Pieces; there is no Fear of its being adulterated, no other Root resembles it except the smaller Galangal, and that would be making it better, not worse by the Mixture. Both the Kinds of Galangal were wholly unknown to the antient *Greeks*; there have indeed been some, who have supposed *Dioscorides* meant the lesser Galangal by his *Acorus*, but that is very erroneous. The greater Galangal was unknown even to the later *Greeks*, and to the *Arabians*, but these Authors were however acquainted with the lesser Kind: *Paulus Aegineta* and *Aetius* have mention'd it under the Name of *Galangas* or *Galankas*; and *Avicenna* under that of *Chaulengiau*, and *Chaserudarua*; with us it has been long in Use, and in very great Esteem: The Galangals are both brought to us from the *East-Indies*, the small Kind principally from *China*, the larger from the Island of *Java*. They are the Roots of the same Plant which is of the number of the *Herbæ bulbosæ affines* of Mr. Ray.

The Plant which produces the larger is call'd *Bauchale Indorum* by *Herman*, and that which produces the smaller the *Lagoudi Indorum* by the same Author, but this is without Foundation; it has long and narrow grassy Leaves, and white galeated Flowers, succeeded by tricapsular Fruits, containing small roundish Seeds.

The Roots of both the Galangals, but particularly of the lesser, abound with a volatile, oily, aromatic Salt. The People of the *East-Indies* use them while fresh, by way of Spice, for the seasoning many of their Dishes. With us the lesser is esteem'd an excellent Stomachic, and is made an Ingredient in almost

all bitter Infusions, and Tinctures : It has also the Credit of being a great Cephalic, Cardiac, and Uterine, but it is more rarely used in those Intentions : It is greatly recommended, particularly in Vertigoes ; and when they arise from Crudities in the Stomach, it is easy indeed to see how Medicines of this Kind may be of Use in them. The greater Galangal possesses the same Virtues with the other, but in a more remiss Degree : It is very little known in our Shops, but among the *French* it is common, their Vinegar-makers using a great deal of it to give a Sharpness to that Liquor.

The common Method of giving Galangal is in Infusion with Gentian, Orange Peels, and other Stomachics : The common Proportion is from one Dram to two to a Pint, and the Dose two or three large Spoonfuls.

C H A P T E R X V.

G E N T I A N A,
Gentian.

GENTIAN is a large and long Root, of a tolerably firm Texture, and remarkably tough : It is brought to us of various Sizes, the most frequent Standard is about six or eight Inches in Length, and an Inch or somewhat more in Diameter ; but we sometimes see it sixteen or eighteen Inches long, and of the Thickness of a Child's Arm. It grows gradually smaller from the Top downwards, but seldom runs single to any great Length, more frequently dividing into two or more large Branches.

It is naturally of a rough, corrugated, or wrinkled Surface ; and though of a less dense and compact Texture, than many other of the officinal Roots, it is very firm, and has a Toughness that renders it as difficult to break as any of them. It is considerably heavy, and does not cut very easily through with a Knife, but leaves a very smooth and shining Surface ; it is of a dusky brownish Colour on the outside, but of a very bright and clear yellow within ; it is very difficultly reduced to Powder, unless thoroughly dry'd first ; it has a faintish and somewhat disagreeable Smell, and an extremely bitter Taste.

It is to be chosen fresh, tough, and yet well dry'd, of a middle Size, and free from the small Fibres ; if any of it is seen scorched it is to be rejected. They have a Way of drying it in Ovens in some Places, which renders it much less fit for Use than that which is dry'd in the Air ; but this is easily discover'd by its wanting that Toughness and dense Texture, which that has been dry'd in the Air, and which our Druggists try in vain to give it by any subsequent damping.

Gentian is too cheap to let it be worth while for any Body to adulterate it, and too bitter to suffer any other Root to be impos'd on People in its Place. There is indeed one Root in the World which unhappily very much resembles it, and which we have lately been threatened with very bad Effects from, as it was casually mix'd among some Parcels of Gentian. This is the Root of the *Thora Waldensis* or *Thora Cyclaminis folio* of *John Baubine*, it much resembles the smaller Roots of Gentian, but is, when nicely examin'd, of a darker Colour on the outside, and wants the Yellowness of the Gentian within ; it is also more friable, and is of a remarkably virose Smell. This Root has been
always.

always esteemed, and probably with Justice enough, a Poison. There was unluckily a Quantity of it mixed among the Gentian sent from *Hamburg* about two Years ago, and many very bad Accidents attended the Infusions made with the Roots among which it was; but happily the Mischief was stopped by a Discovery of the false Root among the Gentian; though the Unacquaintance of the World in general with these Subjects, left them in the dark as to what that Root was.

Gentian has been known to the World as a Medicine, almost as long as Physic has been written of. *Dioscorides* and *Galen* speak largely of it, and shew us very plainly that they mean the same Root that we do by that Name.

It is brought to us from *Germany*, where it is in many Places cultivated for Use as Liquorice is in *England*: It is frequent also wild on the *Alps* and *Pyrenean* Mountains, and in several Parts of *France* and *Italy*.

The Plant which produces it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ flore monopetalo vasculiferae* of Mr. Ray. It is described by *Gerard Parkinson* and the rest under the Name of *Gentiana major*, and by *John Baubine* under that of *Gentiana vulgaris major Hellebori albi folio*, the great white Hellebore leaved and common Gentian. *Dioscorides* tells us that it obtained the Name by which it is still known long before his Time, from one *Gentius*, a King of *Illyria*, who discovered its Virtues. The Root sends up a Number of large, oblong Leaves, broad, and of a shining green. They have four or five large longitudinal Ribs, and are of a very tough Texture. The Stalks are three or more Feet in Height, and have the like Leaves standing in Pairs at their Joints. The Flowers stand in Clusters round the Stalks, and are of a pale yellow. The Seeds are flatted and orbicular, marginated, and of a pale reddish Colour.

Gentian, on Analysis, is found to contain a very large Portion of Oil, a great deal of Earth, and no inconsiderable Quantity of an acid Phlegm, with a small Portion of an urinous Spirit.

Gentian is one of the best and most valuable stomachic Bitters that the *Materia Medica* affords us: It procures an Appetite, and greatly assists Digestion. This is the Intention in which it is principally used in the present Practice; but if we will credit Authors, this is one of the least of its good Qualities; they have recommended it to us as a Febrifuge and an Alexipharmic, and as the most certain of all Remedies for the Madness from the Bite of a mad Dog. It is not only recommended internally, but externally also, on this Occasion, a Cataplasm made of *Venice Treacle* and the Powder of this Root being ordered to be applied to the Wound. It is said to be as certain a Remedy as the Bark for Agues, and even to be one of the best known Medicines against the Plague. Our Surgeons sometimes use a Piece of it by way of a Tent, when they would dilate gradually the Orifice of a Wound.

Gentian is an Ingredient in the bitter Infusion and Tincture of the *London* and most other Dispensatories. The only simple Preparation of it in Use, is the Extract which we find was in Use even in the Time of *Dioscorides*.

EXTRACTUM GENTIANÆ,

Extract of Gentian.

Take a Pound of good sound Gentian Root, cut it into thin Slices, and pour upon it in a Matrafs two Quarts of Water; keep it in a Sand Heat under

under the Degree of boiling for twelve Hours, often shaking it; then strain off the clear Liquor, and filter it through Paper; after which evaporate it in the same Sand-heat to the Consistence of thick Honey.

This is good in all Cases in which Gentian is; its Dose is from ten Grains to forty.

C H A P T E R XVI.

NARDUS,
Spikenard.

TH E Word *Nardus*, Spikenard, has been used for the Name of several different Roots, or Parts of Roots, not only at present, but in all the Times we have any Acquaintance with. In the Days of *Dioscorides* there were four Kinds of *Nardus*, distinguished by their several Epithets, as well as in those of the later *Greeks*. At present we retain three of them, and those under the same Names that they stand under in *Dioscorides*. 1. The *Indian*. 2. The *Celtic*, And 3. The Mountain *Nard*. This latter however is a less determinate Name than the other two, having been ascribed to several different Plants, and being scarce yet regularly affixed to any of them.

NARDUS INDICA,
Indian Spikenard.

This is the most famous for its Virtues, and at present the most in Esteem of any of the Kinds. It is not so properly expressed by the Name of a Root, as by that of a Congeries of fibrous Substances adhering to the upper Part of a Root. We meet with it in Tufts of an Inch or two, sometimes more in Length, and of about half an Inch in Thickness. It is a hairy Mass or Congeries of Capillaments, long, slender, flattish, and variously convoluted and twisted about one another. These are properly nothing more than the Filaments of decayed Leaves, and are of a brownish red, approaching to what we call Chocolate Colour, but somewhat paler. They are very light, somewhat tough and flexible, but easily cut with a Knife or Scissars, and very easily reduced to Powder in a Mortar. They are of a very agreeable aromatic Smell, and of an acrid, aromatic and bitterish Taste. The Root to which these Filaments adhere is, when full grown, about three or four Inches long, of the Thickness of a Man's Finger at the Head, from which it gradually tapers to a Point, and is furnished with a great Quantity of Fibres. It is of a dense Texture, considerably hard, and moderately heavy, and is of a fragrant Smell and aromatic Taste, but less so than the Filaments we have been describing, which are the true *Nardus*, the Root being to be rejected as of much less Value. The Congeries of these Filaments is called by some, though very improperly, a Spike. We sometimes meet with Leaves not yet wholly divested of their intermediate Substance, and a few hollow striated Stalks among the Filaments which compose the general Mass; and these have generally more Fragrancy when rubbed between the Fingers, than the bare Filaments.

Spikenard is to be chosen light, firm, and of a good Colour, the redder the better; it must be of a fragrant Smell and aromatic Taste, and not dusty. We have our *Indian Spikenard* from the Island of *Java*, where it grows in
great

great Abundance, and is used not only in Medicine but in Sauces by the Natives, being an excellent and wholesome Spice. It has been known to the medical Writers of all Ages. *Dioscorides*, beside the two other distinct Species of Spikenard, mentions three Kinds of this very *Indian* one, the genuine *Indian* Kind, the *Syrian*, and the *Gangetide* Spikenard. At present we have two Sorts of it in the Shops, as far as a Difference in Figure will bear out such a Distinction; one of these is in longer, and the other in shorter Filaments; and the short Kind is less red, and darker than the other; but the Virtues and Qualities of both are the same.

The Plant which produces the true *Indian* Spikenard is of the Number of the *Triandria Digynia* of *Linnaeus*, and of the *Herbæ Graminifoliæ non culmiferæ* of Mr. Ray. It is mentioned by *Breynius* in his *Prodromus*, under the Name of the *Gramen Cyperoides aromaticum Indicum*; but we still want a good Description of it. The *Indian* Spikenard has the Credit of being a very good Cephalic and Stomachic. It is by many warmly recommended in nephritic Cases, and as a Promoter of the Menfes. It is also given in chronic Cases to remove Obstructions of the *Viscera*. The Ancients used it externally in Disorders of the Stomach; and *Galen* tells us of no less than an Emperor cured by this means, of a very troublesome Complaint of that Kind. *Bontius* tells us that the *Indians* steep it in Vinegar, and adding Sugar to the Infusion, give it in Obstructions of the *Viscera*. *Riverius* commends it against Hæmorrhages, and the ancient *Greeks* made it an Ingredient in most of their *Collyria*, and their more costly Unguents. Perhaps it has, at one Time or other, had more Reputation as a Medicine than it deserved, but assuredly at present it has less, the modern Practice having almost wholly rejected it, unless as an Ingredient in some of the officinal Compositions.

NARDUS CELTICA,
Celtic Spikenard.

Though the *Indian* Spikenard is not properly speaking of the Number of Roots, the *Celtic* is truly so. It is an oblong Root of an irregular Figure: We meet with it in Pieces of two, three, or more Inches in Length, and of the Thickness of ones little Finger, sometimes, though rarely, much more. It is not of the Shape of the ordinary long Roots, but it is of an equal Thickness at both Extremities, and is plainly enough seen to be of the Number of those that creep along under the Surface of the Earth, not of those that penetrate strait down into it. It is usually crooked, and variously contorted, not perfectly round, but rather flattish, and has various little Protuberances, and many long and slender Fibres issuing from several Parts of it. Sometimes we meet with these Fibres alone under the Name of *Celtic* Spikenard, sometimes with the Roots alone cleared from them; but more frequently with the whole Roots, Fibres and all, and with the Remains of some of the dried Leaves issuing from them. The Root is naturally of a tolerably smooth Surface, but it is often covered with a Numbr of dry chaffy Scales or Films in the Manner of the Roots of our Ferns. It is light and moderately hard; but it cuts tolerably easy, and shews a somewhat glossy Surface. Its Colour is a dusky brownish on the Surface, with some Mixture of Reddishness, and more red within. The little Films or Scales that cover it are usually of a yellowish or dead greenish Colour. It is of a fragrant and aromatic,

aromatic, but yet not a very pleasant Smell upon the whole; there being a remarkable Admixture of something disagreeable in it. It is acrid, aromatic, and somewhat bitter to the Taste. *Celtic* Spikenard is to be chosen fresh and plump, the whole Root, Fibres, Remains of Leaves and all, and it should be tolerably firm and strongly scented.

The *Celtic* Spikenard, as well as the *Indian*, was known in the Times of the earliest *Greeks*. It had its Name from its being found in *Celtic Gaul*, and is still produced there in great Abundance. What we have is brought from the *Pyrenean* and *Alpine* Mountains, where it is vastly abundant.

It has been called by Authors, *Nardus Celtica*, *Spica Celtica*, and *Spica Gallica*, and by some *Spica Romana*. *Dioscorides* calls it *Nardus Celtica* and *Alungica*, and *Pliny* *Saliunca*. The *Arabian* Authors, who call the *Indian* Spikenard *Alsembel Alcib*, call this *Alsimbel Arum*.

The Plant which affords us the *Celtic* Spikenard is of the Number of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ Monospermæ* of *Mr. Ray*, and is described by *Tournefort* and others under the Name of *Valeriana Celtica*, and by others under those of *Nardus Celtica Dioscoridis*, and *Nardus Alpina*. Its Leaves are oblong and broad; its Stalks are six or eight Inches high, and have Leaves standing in Pairs on them. The Flowers grow at the Tops in Clusters, and are of a pale red or whitish, not large, and each succeeded by a single Seed winged or bearded with Down.

The Root scarce buries itself under the Surface of the Earth, but creeps along it every Way among the Moss, and is easily taken up without digging. The whole Plant has an evidently aromatic Smell, and yet has something of the Stink of the wild Valerian with it. It flowers in *August*, and is collected for Use in *September*, at which Time it is observed to be most fragrant.

Celtic Nard is allowed by Authors to possess the same Virtues with the *Indian*, and many of them in a more eminent Degree: It is found to be a very good Diuretic, and is given with Success in nervous Cases, and in Disorders of the Stomach. It is an Ingredient in some of our Shop Compositions, and in many more of those of other Nations, and is sometimes prescribed externally as an Ingredient in Fomentations. At present it is less used with us than it deserves.

NARDUS MONTANA

Mountain Spikenard.

Nardus Montana, or as others write it, *Nardus Sylvestris*, for they mean the same by these two Names, is a Term as arbitrarily employed as almost any in the *Materia Medica*. There are some who express by these Names the Root of the wild Valerian, others the *Asarabacca* Root, and others the *Baccharis Monspeliensis*. What is distinctly and properly meant by the Term is however a Root of a Plant of the Valerian Kind, somewhat approaching to the *Celtic* Nard in its Qualities and Virtues, but different in Figure.

The true *Nardus Montana* is a moderately large Root of an oblong Figure: We usually meet with it about two Inches in Length, and about half an Inch in Thickness, largest at Top, and terminating obtusely at Bottom. Its Top is usually ornamented with a Number of Fibres in the Manner of the other Spikenard, and there is often left among these the Bottom of the Stalk. The Root is of a rough and wrinkled Surface, of a somewhat lax Texture, but moderately

rately heavy ; not easily broken between the Hands, but cutting very freely with the Knife, and easily enough reducible to Powder. It is of a brownish Colour on the Surface, and paler within ; the Fibres, or Capillaments, left on its Top are usually greyish, and the Remains of the Stalk that is among them red. The whole Root is of a fragrant Smell, somewhat like that of the *Celtic* Spikenard, and of an aromatic and acrid Taste. It is to be chosen fresh, plump, not too wrinkled, with a sufficient Quantity of Fibres on it, and of a strong Smell.

It is liable to great Adulteration, and the Ignorance of the Buyer often gives an Opportunity of felling any of the Roots, mentioned above, in its Place ; but the Description given here of the true Mountain Nard, makes it easily distinguished from them all. The Antients have said many great things of the Virtues of *Nardus Montana*, but *Dioscorides's* Account, tho' the best we have of it, is so very imperfect, that it does not appear clearly to us, whether ours is or is not the same with that of their Times. He calls it *Orene Nardus* or Mountain Nard ; and the *Arabians* distinguish it from the rest by the Name of *Alnardin Gebali*.

The Plant which produces our Mountain Spikenard is of the same Class with that which affords us the *Celtic*, one of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ Monospermæ* of *Mr. Ray*. It is described by *Tournefort* under the Name of *Valeriana maxima Pyrenaica Cacaliæ folio*, and by that of *Nardus montana altera* in the *Historia Lugdunensis*. This Plant rises to three, four, or more Feet in Height ; the Stalk is usually of a red Colour, knotted at Distances, light and hollow, and very thick ; the Leaves stand on it in Pairs, and are smooth, notched at the Edges, and much resemble those of the *Cacalia* ; the Flowers and Seeds are like those of the other Valerians ; the *Nardus Montana* has all the Virtues of the *Celtic* Kind, but in a more remiss Degree.

Among the many Roots very improperly kept in the Shops of the Druggists, of the several Parts of *Europe*, under the Name of *Nardus Montana*, we have sometimes met with one, which, though not the genuine Drug, yet is so much of the same Nature, that the Difference in regard to Use is not material. This is of a paler Colour than the true *Nardus Montana*, and is usually smaller, and often composed of two or three tuberous Roots growing together, as it were with Fibres issuing both from their Bottom and Top. It is of a less aromatic Smell than the genuine Root, but otherwise is much like it in all its Qualities. The Figure of this easily distinguishes it from all the other Counterfeits ; it is the Root of another Species of the same Plant which produces the true Kind, call'd by the *Bauhines* *Valeriana montana minor*, and *Valeriana radice olivari*, the small Mountain Valerian, or the Valerian with an Olive fashion'd Root. It is a smaller Plant than the former, and its Leaves are less divided, and of a deep blackish green : It is frequent on the Mountains between *Germany* and *Italy*, and is there gather'd annually in considerable Quantities, and partly used as Spikenard, partly sent abroad under the Name of *Nardus Montana*, and sometimes under that of *Nardus Celtica*, though one would think the Person must know very little of the officinal Roots, that could not distinguish them.

CHAPTER XVII.

VALERIANA SYLVESTRIS,
Wild Valerian.

THIS Root was so little known in the Shops till of late, that its very Name is omitted by many of the Writers on the *Materia Medica*, in their Lists of Drugs; yet it is not saying too much to affirm, that it has more Virtues than half the Roots they have been so lavish in the Praises of.

It is a pale colour'd Root, consisting of a small Head or Knob, from which there grow a vast number of Fibres; the Head bears so small a Proportion to the whole, that it is generally look'd on as a merely fibrous Root. The Fibres are moderately large, usually of the Thickness of a Pack-thread; they are of a smooth Surface, and of a tolerably firm Texture, somewhat tough, and not very easily powder'd, unless carefully dry'd first; they are moderately heavy, and are externally of a whitish Colour, with a small Admixture of brown, and somewhat whiter within; they are easily cut through with a Knife or Scissars, and are of a very strong Smell, and that of a peculiar Kind; there is evidently something fragrant and aromatic in it, and with that a very offensive Stink; in Taste they are somewhat acrid and aromatic, but have a faint Bitterness, and their peculiar Smell is very sensible while a Person is chewing them.

Wild Valerian is to be chosen in large, fair, and sound Roots, of the palest Colour that may be, not brittle or dusty, and above all things of a strong Smell. They are often adulterated with the Roots of the great Water Valerian, but the want of Smell in these, and their Fibres being longer, thicker, tougher, and whiter, easily distinguish them.

It is but of late that this Medicine has been introduced into the Shops. The old Writers indeed speak of Valerian, and even of wild Valerian, but they mean only the great Water Valerian by that Name. It has been pretended that the *Phu* of *Dioscorides*, and the ancient *Greeks*, was this wild Valerian, but who ever will carefully examine their Works, will find that it was the Water Valerian they used the Root of, not this wild Mountain Kind. We have it dug for medicinal Use in our own Country; the Heaths of *Kent* and *Essex* afford a great deal of it, nor are the rest of the Parts of *England* without it. It has been attempted to be cultivated for Use in Gardens, but the Root of such is never so good as that which has stood in a barren Soil, and been exposed to the violent Heats of the Sun in Summer, with a very small supply of Humidity.

The Plant which produces it is one of the *Triandria Monogynia* of *Linnaeus*, and one of the *Herbæ Monospermæ* of *Mr. Ray*. It is described in *Morison's* History under the Name of *Valeriana Sylvestris major foliis angustioribus*, and by others under that of *Valeriana montana major*. It grows to three Feet or more in Height, its Leaves stand in Pairs, and are large, hairy, and of a dead dusky green, divided down to the middle Rib, so as to seem made up of many small Leaves affix'd on the two Sides of a Stalk; the Flowers stand in large Tufts at the Tops of the Branches, and are of a pale whitish red Colour, and

and are succeeded each by a single Seed wing'd with Down: The Root taken immediately up has a very strong Smell, and it grows much more scented in keeping.

This Root taken up at a proper Season, and carefully dry'd, is one of the best nervous Simples of the Shops. The late Dr. *James Douglass* took great Pains to introduce it into general Use, and succeeded very happily in the Attempt. It is given in Powder from five Grains to a Scruple for a Dose, and also in Tincture and Infusion. It is found of the greatest Service in all Disorders of the Nerves, and will go farther toward curing an Epilepsy, than perhaps any other single Medicine in Use, many very deplorable Cases of this Kind having been cured singly by it: It is also recommended against intermittent Fevers, but it is less known at present in that Intention. The College of Physicians have thought so well of this Root, as to order two Tinctures of it to be kept in the Shops, the one under the Name of the Simple, the other under that of the volatile Tincture of Valerian.

TINCTURA VALERIANÆ SIMPLEX,
Simple Tincture of Valerian.

Take of wild Valerian Root, reduced to a tolerably fine Powder, four Ounces; Proof Spirit, a Quart; set them together in a Matrafs in a gentle Sand-heat for three Days, then strain off the Tincture and filter it for Use. The Dose is from ten to forty Drops.

TINCTURA VALERIANA VOLATILIS,
Volatile Tincture of Valerian.

Take of the Root of wild Valerian four Ounces; of the volatile aromatic Spirit, commonly call'd *Sal Volatile Oleosum*, a Quart; digest them together cold for a Week, the Root having been first finely powder'd, and the Vessel being often shook in the mean while; then strain off the clear Tincture for Use.

This is a noble Medicine to be given instead of the plain *Sal Volatile*, or the Spirit of Hartshorn, and for many other Purposes, where volatile and nervine Medicines are necessary. Its Dose is from ten Drops to five and twenty.

Besides this, which is by much the most valuable of all the Valerians in Medicine, there are three other Kinds, exclusive of those received under the Name of *Nardi*, as the *Nardus Celtica* and *Montana* used in the Shops. These are the great Garden Valerian, the great Water Valerian, and the small wild Valerian.

VALERIANA HORTENSIS,
Garden Valerian.

This is a Root of long standing in the Shops, and is sometimes express'd by the simple Name of *Valeriana*, without Addition; the others being distinguished by the Epithets *Sylvestris*, and the rest. It is an oblong Root of the tuberous Kind, we meet with it in Pieces of about two Inches long, and of the Thickness of half an Inch or more: They are of an irregular Figure, usually thicker in the Middle than at either End, and of a rough Surface, being mark'd with Rings and other Furrows: They are of a moderately compact Texture, but not very heavy, or even hard; they are easily cut through with a Knife, and exhibit a somewhat glossy Surface where they are cut; they are externally of a dusky

dufky brown, and of a paler Colour within; they are of a strong Smell, somewhat aromatic, but upon the whole rather disagreeable than otherwise, and of an acrid and somewhat bitterish Taste.

The Garden Valerian Root is to be chosen full, fresh, and sound, moderately heavy, and not friable or dufty; it is liable to be Worm-eaten, and then is of no Value. It has been long known in the Shops: *Dioscorides* plainly means this in several Places under the Name of *Phu*: It is an Ingredient in some of the officinal Compositions, under the Name of *Valeriana* simply, but often under that of *Phu*.

The Plant which produces it is of the same Class with the former, and is described by Authors under the Name of *Valeriana Hortensis*, *Valeriana major odorata radice*, and *Phu olusatris folio Dioscoridis*. Its Virtues are of the same Kind with those of the wild Valerian, but it possesses them in a much more remiss Degree.

The second Kind of great Water Valerian Root we have already described among the Roots, used to adulterate that of the wild Kind: The Plant which produces it is the *Valeriana aquatica major* of Authors, call'd by many the *Phu Dioscoridis*: It is a tall handsome Plant, very common by Ditch Sides, with deeply divided Leaves, and large Tufts of pale Flesh colour'd Flowers. It is very certain that *Dioscorides* more frequently means this than the former, by the Name *Phu*, though he evidently confounds them both under it. The Roots of this Species are celebrated for their Virtues against the Epilepsy, but are certainly inferior in that Intention to the wild or mountain Kind.

The third is the small whitish fibrous Root, of the common little Water Valerian, but this is scarce ever heard of, either in the Shops or Prescription.

C H A P T E R XVIII.

ARISTOLOCHIAE,

The Birthworts.

WE have four Roots in the Shops under the Name of *Aristolochiæ*, all of different Shape and Figure, and all belonging to different Plants: These however are the different Species of the same Genus, and the Roots all possess the same general Virtues, though in different Degrees.

The Plants which produce the *Aristolochiæ* or Birthwort Roots are of the number of the *Gynandria Hexandria* of *Linnæus*, the *Herbæ flore monopetalæ vasculiferae* of Mr. Ray. The several Roots we shall treat of singly.

ARISTOLOCHIA ROTUNDA,

Round Birthwort.

This is of the number of the tuberous Roots, and very well deserves its Name of round, being frequently pretty regularly of that Figure. It is brought to us of various Sizes, from that of a small Walnut to such as are of two, three Inches, or more in Diameter; the more usual Standard, however, is about the Size of a large Walnut with its outer Coat on. Its Surface is wrinkled and corrugated, the Furrows on it usually running in various Directions, not all longitudinally, as they do in many of the long Roots; it is solid and

and firm, not very heavy, but moderately hard, cutting evenly and smoothly under the Knife and leaving a polish'd Surface; it is of a pale brown Colour on the Surface, and of a pale yellow within; it powders tolerably easily, and is of an acrid and aromatic Taste, but with a very disagreeable bitter with it. The Root has a considerably thick Bark, and when fresh has usually here and there a few Fibres.

Round Birthwort is to be chosen in large and plump Roots, not too much wrinkled on the Surface nor too light. Such as is friable or dusty, and Worm-eaten, or has lost its Smell, is wholly to be rejected. It has been known from the very earliest Times we have Accounts of. *Dioscorides* and *Galen* mention it under the Name of *Aristolochia strongyle*, and *Pliny* calls it *Aristolochia fœmina*, making the long Kind the Male, according to the fancyful way of writing of those Days.

The Plant which produces it is frequent in *Germany*, *France* and *Italy*, from all which Places the Root is brought to us. It is described by the *Baubines*, and most of our other Botanists under the Name of *Aristolochia rotunda*, *Aristolochia rotunda flore ex purpura nigro*. Its Stalks arise to two or three Feet high, but they are weak and tender; the Leaves stand alternately and have scarce any Pedicles. The Flowers grow from the *Alæ* of these, and are tubular, of an odd Figure, and of a dusky purple Colour; these are succeeded by a roundish membranaceous Fruit fill'd with a white fungous Matter, among the Seeds which are disposed in six Cells.

ARISTOLOCHIA LONGA,
Long Birthwort.

This as well as the former is of the number of the tuberous Roots, it is not of the regular Form of the common long Roots of Plants, which from a large Head gradually taper away to a Point; it is frequently thickest in the middle, and often runs of the same Thickness nearly throughout its whole Length; it is brought to us of various Sizes from the Length and Thickness of a Finger, to such as are a Foot or more in Length and four Inches in Diameter: its Surface is rough and corrugated, it is of a moderately firm Texture and not heavy. It cuts tolerably easy with a Knife, and leaves a smooth glossy Surface; its Colour on the Surface is a dusky brown, but it is of a faint yellow within. It has something of an aromatic Smell, tho' of a very singular Kind when fresh broke, and in Taste it is acrid and of a very disagreeable bitter. It is to be chosen fresh, sound and firm, not easily broken and moderately heavy. Care is to be taken that it be not dusty or Worm-eaten, and that it has not lost its Smell or Colour. Long Birthwort was as well known among the Antients as the round Kind. It was called by the *Greeks*, *Aristolochia dactylites*, the Finger Birthwort, from its Resemblance in Length and Thickness to a Finger. *Pliny* and the rest of the *Latin* Authors call it the Male Birthwort.

The Plant which produces it is described by all the botanical Writers under the Name of the *Aristolochia longa*. Its Stalks are square, they grow to two Feet or more in Length, and are divided into numerous Branches, but they are so weak that they lie often upon the Ground; the Leaves are smaller than those of the round Kind and stand on Pedicles. The Flower is long and tubular, and is of a whitish green Colour, and the Fruit resembles a Pear in Form, the Seeds are flat and of a reddish brown.

ARISTOLOCHIA CLIMATITIS,
Clematite Birthwort.

The Clematite Birthwort is a Root extremely different from the two former in Shape, tho' approaching to them in its Qualities. It is of a long and slender Shape, seldom exceeding the Thickness of a Goose Quill, but growing to great Lengths and divided into numerous Branches. We generally meet with it in Lengths of five or six Inches, but it might be sent much longer if necessary; it is of a somewhat corrugated or wrinkled Surface, the Furrows running longitudinally; it is of a tolerably firm Texture, but very light: it is moderately hard, but it cuts more easily than either of the other Birthworts, and leaves a smooth but less glossy Surface behind the Knife. Its Colour on the Surface is a dusky brown with some faint Admixture of a greyish Cast; within it is of a pale yellowish Hue; it powders tolerably easy in the Mortar; its Smell is more strong and piercing than that of either of the former, but it is more disagreeable. It is more bitter to the Taste also than either of them, and discovers its Taste more immediately: they require to be held a little time in the Mouth before they affect the Tongue, but this discloses itself the Moment it touches it.

The Clematite Birthwort is to be chosen in long and moderately thick Roots, such as are the least wrinkled on the Surface, and are considerably firm and hard, and of the strongest Smell: it is liable like the rest to decay in keeping, and will be dusty and Worm-eaten, in which Case it loses its Smell and is of no Value. It is brought to us from the *Pyrenean* Mountains, and from many Parts of *Germany*. It grows also very plentifully in *Spain* and in *France*, particularly about *Montpelier*, and has been met with in *England*, but probably not wild originally, but by some accident straggled out of some Garden.

The Plant which produces it is described by the *Baubines*, and our other botanical Writers under the Name of *Aristolochia Clematitis*, and *Aristolochia Saracenicæ*, Saracens Birthwort. The Root lies deep in the Earth, and spreads itself to a great Extent; the Stalks grow to two or three Feet high, and are firmer and stronger than those of any other, Birthwort standing erect not drooping as they do, and are round. The Leaves are large, of the Shape of a Heart, and stand on moderately long Pedicles; the Flowers are of a pale Colour, and stand several together in the *Axæ* of the Leaves, and are smaller than those of the others; the Fruit is round and large, growing to the Size of a large Walnut, and the Seeds are proportionably large also. The Antients were as well acquainted with this as with the two former Birthworts; *Dioscorides* and *Galen* describe it under the Name of *Aristolochia Clematitis*, and *Lepte*, and the *Latins* after *Pliny* call'd it *Aristolochia tertia Clematitis*, and from the latter Name of the *Greeks Tenuis*, but this is a Name less proper at present, as it confounds it with the fourth Kind of *Pliny* next to be described.

ARISTOLOCHIA TENUIS SIVE PISTOLOCHIA,
Small Birthwort or Pistolochia.

This is a Root extremely different, not only from the two common Birthworts, the long and the round, but also from the last described, tho' it approaches nearer to that in Shape and Size than to either of them. It is a fibrous Root composed of a Multitude of long and slender Filaments, propagated from one general Head [or joining in one at the top; the Tufts of these

consist often of ten, twenty or more, and the single Filaments or Fibres seldom are equal to a Crow Quill in Thickness. They are of a tolerably smooth Surface, and of Texture moderately firm and hard, and unless kept too dry, somewhat tough: they are very light and are easily cut through with a Knife or Scissars, leaving a tolerably smooth but not glossy Surface behind the Instrument. In Colour they are throughout of a pale yellow, though somewhat paler on the Surface than when broken; they powder with some Difficulty unless well dry'd first, and they are of an aromatic and quick Smell, not so disagreeable as that of the other Birthworts; in Taste they are more acrid and bitter than any other Species.

The *Pistolochia* is to be chosen in the largest Roots that can be had, thick, tufted, and of as yellow Colour as can be; it should smell briskly and taste very strong. This Kind of Birthwort is less liable to the Mischief of being Worm-eaten than any of the others, but there is often Dirt among it, and it is liable to an Adulteration that few are aware of, and which therefore passes off too well in general; this is the mixing with it the Roots of the *Melissa* of *Tragus*, or the *Melissa humilis latifolia maximo flore purpurascens* of *Tournefort*. They sometimes sell these alone in the Place of the other, but the Cheat is easily discover'd by the want of the peculiar Smell and bitter Taste in these, which Character this and all the other Birthworts have so strongly, that it is almost impossible for a Person who once knew their Smell to mistake any thing else for them.

The *Greeks* who were very well acquainted with the three former Species of the *Aristolochia* had no Knowledge of this, it first got into Use among the *Romans*; *Pliny* describes it under the Name of *Aristolochia quarta*, and also by that of *Pistolochia*, and *Aristolochia Polyrrhizos*, both which Names have also been preserved to this time for it. We have it from *Germany* among the other Birthworts, but it is as well as the rest produced in *France* also, and in many other Parts of *Europe*.

The Species of *Aristolochia* to which it belongs, is that described by *Dodonius* and the *Baubines* under the Names of *Pistolochia* and *Polyrrhizos*; it is a much smaller Plant than the rest, seldom growing to more than five or six Inches high. The Stalks are striated and branch'd, but weak and scarce able to keep erect; the Leaves are cordated, small, rough, and somewhat sinuated at the Edges. The Flowers are like those of the round Birthwort, but smaller in Colour, they are of a pale yellowish green, sometimes blackish; the Fruit is round and fleshy, but small, much resembling those round green Galls, sometimes seen on Ground Ivy.

The Roots of all the *Aristolochias* possess the same Virtues, but in different Degrees; the long and the round are the Kinds principally in Use, and of these the round is prefer'd as the better, and the other two are scarce known more than by Name: there is much Error in this however. The Climatite Birthwort is truly the Kind which has most Virtue, after this come the round and the long which are about equal in Virtue, and the *Pistolochia* is the least valuable of them all as a Medicine. On a chemical Analysis they all yield the same Principles, they all contain a great deal of Oil and a large Portion of Earth, a moderate Portion of an urinous Spirit, and a very considerable Quantity of an acid Phlegm; and the Remainder, after all these are separated, affords a great deal of a fix'd Salt which does not turn a Solution of corrosive Sublimate

mate yellow as the other alkali Salts do, but only whitish or milky. The Juice of the fresh Roots will turn Syrup of Violets red.

All the Birthworts are said to be cephalic, vulnerary and uterine; they are also class'd by some among the Alexipharmics, and recommended highly in Diseases of the Breast. The principal Virtue now acknowledg'd in them, is that of promoting the Menfes and Lochia after Delivery. It is said to have so much Force this way as to be able to cause Abortion if given to Women with Child. *Simon Pauli* recommends a Decoction of it in Asthmas, and *Hoffman* recommends an Infusion of the Leaves of the long Kind, as a Preventative of a Consumption from the Spitting of Blood after violent Coughing. The Decoction or Infusion of these Roots, though prescribed by many Physicians, are too bitter to be taken with any Patience; the Root in Powder is easily given in Bolusses, and answers all the Intentions at least as well: The Dose is from a Scruple to two. The long and round Birthwort are preferred by most in extemporaneous Prescription, but they are not Ingredients in any of the Compositions in common Use in our Shops: The *Clematite* is an Ingredient in the very earliest Prescriptions of the *Theriaca*. There has indeed been a Dispute among Authors whether the *Clematite* or the *Pistolochia* Birthwort was the Kind meant by *Andromachus*, who has called it *Lepte*. But it is very clear that the *Clematite* was the Kind that he intended, and which he called by no other Name, than one that was as common as that of *Clematites* among the old Greeks for it.

The round Birthwort was an Ingredient in the *Hiera Diacolocynthidos* and many other Compositions of the retained in our former Dispensatories, but now out of Use.

CHAPTER XIX.

FRAXINELLA, *White Dittany Root.*

THIS is a Root not brought into the Shops as most others are, just as taken up out of the Earth and dried; but before we receive it, it is slit lengthwise, the woody Part that occupies the Center is taken out, and only the exterior or cortical Part separated for Use. In this State the Part of the Root which we call *Fraxinella* is a hollow, cylindrical, or somewhat conic Tube, and resembles a Piece of Cinnamon in Figure. We meet with it of several Sizes, but from one Inch to four in Length, and from a Quarter of an Inch to three Inches in Diameter is the usual Standard. It is not a very thin Bark: It is often an Eighth of an Inch in Thickness; its Surface is tolerably smooth and even, and when broke it appears of a somewhat spongy Texture. It is very light, and not so hard but that it cuts easily with a Knife. Its Colour is a dusky whitish on the outside, a something cleaner white on the inner Surface, and it is of a tolerably pure white when fresh broken. It powders tolerably easy: When fresh it has a peculiar Fragrancy in the Smell, but it by Degrees loses this in keeping. Its Taste is bitterish, and has something acrid also in it.

It is to be chosen in moderate sized Pieces, the very large and very small ones are always inferior to these in Virtue; the Size at which they are best of all is about the Thickness of a Man's Finger. They should be firm and sound, not dusty when broken, and of an agreeable Smell. Nothing is so much to be avoided in this Root as its being too old. Many have declared it a mere insipid Stick of no Use in Medicine, but such have judged of it from decayed Specimens. It is not subject to much Adulteration, and when well coloured may generally be depended upon for genuine.

Fraxinella was wholly unknown to the Ancients, neither the *Greeks*, *Arabs*, nor *Romans* have left us any thing about it: It is indeed only within these hundred Years that it has got into Reputation, unless we allow that *Dioscorides* meant it under the Name of one of his two *Tragiums*, but this though an Opinion countenanced by some, has very little Foundation in the Accounts of that Author. We have our *Fraxinella* from *France* and *Germany*; it grows wild in both these Countries, though not with us; but the Roots used in the Shops are principally had from Plants cultivated for that Purpose in Gardens.

The Plant which produces it is of the Number of the *Decandria Monogynia* of *Linnaeus*, and of the *Herbæ multifiliquæ sive corniculatæ* of Mr. Ray. It is frequent in our own Gardens, and is described by all the botanical Writers under the Name of *Fraxinella*. It rises to two or three Feet high; the Stalks are robust, round, and reddish coloured. The Leaves are composed of many small ones, set along a middle Rib with an odd one at the End; they somewhat resemble those of the Ash Tree, whence the Plant had its Name. The Flowers stand in long Spikes, and are very beautiful, consisting of several Petals of an irregular Form, and of a pale red or whitish Colour, large and of a strong but not disagreeable Smell. The Fruit which succeeds this is a Congeries of five flat oblong Seed Vessels. The Tops of the Branches, and particularly the Cups of the Flowers of this Plant, are covered with little Vesicles filled with a fine essential Oil; and there issues such a Vapour from these, in hot and dry Days, that if a Candle be but brought within half a Foot of them, it takes Fire, and the Flame is diffused all over the Plant. This is a singular Experiment, and will seldom succeed in our Country; but in the South of *France*, in dry Weather, and in the midst of the Day, it seldom fails.

On a chemical Analysis, from five Pounds Weight of the fresh Roots of *Fraxinella*, just taken out of the Earth in Spring, there have been separated of a Phlegm highly sated with essential Oil, and having the Taste and Smell of this Plant in great Strength, one Pound and four Ounces of an acid Phlegm, yet tasting and smelling of the Plant; two Pounds of an urinous Phlegm, eight Ounces with about twenty Grains of a concreted Salt, and three Ounces three Drams of an essential Oil, foetid and somewhat thick, and from the *Residuum* five Drams of a fixed alkaline Salt.

Fraxinella is accounted cardiac, uterine, and alexipharmic; it gently promotes the Menfes, and is said to destroy Worms. There are not also wanting some, who say great Things of its Virtues against malignant Fevers and the Plague. It is an Ingredient in the *Pulvis ad Guttetam*, and is celebrated singly by many, as a Cure for Epilepsies. It is Pity but it had a fairer Trial than the present Practice gives it of what it really will do. We are sensible that Authors generally attribute too many Virtues to Plants. But where there is

is a Promise from the Taste, Smell, and Qualities of the Plant, that it may possess some, if not all, of those which are ascribed to it, it is worth while to try it.

CHAPTER XX.

G I N S E N G.

GINSENG is a Root lately brought into *Europe*, and extolled with immoderate Praises, but its great Price has prevented its hitherto coming into general Use.

It is an oblong Root never growing to any great Size: Its usual Standard is about four or five Inches in Length, and its Thickness that of ones little Finger: It is seldom gathered much less than this, and rarely grows to be much larger. It is thickest at the Top, and terminates in a very slender End at the Bottom. It very rarely however continues single its whole Length, but usually splits into two Branches, at about two or three Inches from the Top; these have given fanciful People the Idea of a Man's two Legs, and the upper or whole Part of the Root has been supposed to represent his Body. But it is not constant in this Division into two Parts; but as it sometimes runs its whole Length single, so on the other Hand, it is sometimes found divided into three or four Branches. It is of a tolerably firm Texture; its Surface is not perfectly smooth, but furrowed in different Places with several Wrinkles. It is moderately heavy, and not over hard; it may be broke between the Hands if it have not been kept so damp as to make it tough, and at any time it cuts easily through with a Knife. It is of a brownish Colour on the outside, and somewhat yellowish within, and is so pure and fine, that it seems almost transparent. It has naturally a great many short and slender Fibres growing from its lower Part, but these are sometimes cut off before it is sent to us. Sometimes we find them on; but what is most singular is, the Formation of the Top of the Root, which when it is sent entire to us is found composed of Knots or *Tubera*, placed over one another in an irregular Manner. These are formed of the Bottoms of the decayed Stalks of the several preceding Years: When the Root is fair and entire, it is easy to know by these how old it is; but very old Roots not being so much in Repute, the People who gather the Ginseng have often the Precaution to cut off some, or even all these Knobs, before they dry the Root. The *Orientals* themselves are so nice on this Score, that they will not use any Root that is not brought to them perfect with the evident Marks of the upper Knob being the real Head, and there being but one or two under it.

Ginseng is of a very agreeable and aromatic Smell, though not very strong; its Taste is acrid and aromatic, and has somewhat bitter in it. It is to be chosen sound and firm, moderately heavy, not too tough, and of a good Smell. Before it is bought, it will be prudent to cut every Root through; for the *Chinese*, of whom we have it, are such expert Cheats, that they frequently find a Way to introduce Pieces of Lead into it to encrease the Weight.

Ginseng was wholly unknown to the Ancients; but though we have not had

had any Knowledge of it long, it has for many Ages been famous among the *Chinese* and in the other *Oriental* Nations. We have it from *China*, and learn that it is produced in the greatest Plenty in the shadowy Forests of that Kingdom and in *Tartary*, between the Degrees of thirty nine and forty seven North; and there is of it in the same Latitudes in *America*. It is generally observed that the Ginseng of *Corea* is larger, hollower, and worse than that of the Places we have mentioned. But the Truth is, that the Root collected there is not Ginseng but the Ninzin, a different Root, to be described in the next Chapter, though generally confounded with this.

We are sensible that this Ninzin and the Ginseng are generally understood to be the same, and even the Words themselves are used by the Generality of Authors as synonymous. Nor it is to be wondered that a Mistake of this Kind should happen when the World was but just getting acquainted with both. The Roots are much alike in their Shape and Colour, and yet more so in their Virtues, which differ scarce at all except in Degree; we are to add to this, that they were both brought from very distant Parts of the World, and very little used among us; and which has been perhaps of more Effect in occasioning the Confusion than all these Circumstances, that it was the Interest of the Seller to have them both understood as the same Root, because the Ninzin came to him at a much smaller Price than the Ginseng. Notwithstanding this general Custom of confounding the two Roots together, nothing is more certain than that they are really distinct Things, the Roots of two different Plants, and those even of two very different *Genera*.

The *Chinese* call the Root we are describing in this Chapter, which is by much the most esteemed by them, Ginseng and *Pe-Tsi*. The Plant which affords it is one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ bacciferae* of Mr. Ray. The Ninzin on the contrary is the Root of one of the umbelliferous Plants. The true Ginseng Plant has been described by Authors under the Name of *Aureliana Canadensis Sinensibus Ginseng, Iroquæis Garent aguen*, and that of *Araliastrum quinquefolii folio majus*. Its Root penetrates straight down into the Earth: Its Stalk is single, about ten or twelve Inches high, and generally of a reddish or purplish Colour. From the Top of this Stalk there grow three or four Pedicles, each terminated by five Leaves which are of an irregular Size, long and serrated at the Edges. From the Top of the Stalk or Center of these Leaves there arises a Pedicle of three or four Inches long, which sustains a Sort of Umbel composed of several lesser Pedicles, an Inch long, and each supporting a single Flower, which is succeeded by a roundish Berry, containing several Kidney shaped Seeds.

The *Chinese* and *Tartars* collect the Roots of this Plant with infinite Pains at two Seasons of the Year, Spring and Autumn: They are forbid to touch them with any Iron Instrument, so that they can only clean them with wooden Knives: They wash them in a Decoction of Millet Seed, and afterwards hang them over the Fumes of the same Liquor, which they boil in considerable Quantities for that Purpose in a close Vessel, in the upper Part of which the Root is suspended over the Surface of the Liquor; after this they dry it for Use, and thus it becomes transparent.

The small Fibres which are taken off they boil in Water, and make an Extract of them which they use in the same Intention with the Root. The

Method the *Oriental*s have of drying or curing this, and some other Roots, is much superior to any we have in Use among us. The Salep is a Root of the *Orchis* Kind, dried in the same Manner ; but it is plain that we want Patience to go through the Process, and that we cannot dry the *Orchis* Roots well in any other Manner.

The *Chinese* value the true Ginseng so highly, that it sells with them for three Times its Weight in Silver. They are too well acquainted with it to let any Adulterations pass upon them : But it is no Wonder if at this Distance, we readily accept the Root of Ninzin, which so much resembles it under its Name.

The *Chinese*, and indeed the *Asiatics* in general, think the Ginseng almost an universal Medicine ; they have Recourse to it in all Diseases as the last Remedy, and readily give themselves over when it will not cure them. There is scarce a Disease that it is not recommended as a Remedy for ; but the Virtues most generally believed to be in it are those of a Restorative, a Provocative, and a Cordial. It is famous in the *East* for giving Strength and Spirits to Persons who have disabled themselves by too free a Use of Women. They recommend it greatly also in the Small Pox, in Fevers of all Kinds, and in Disorders of the Stomach and Bowels, and tell us that Diarrhoeas and Dysenteries are cured by it ; but they caution People not to give it in too large Doses to Persons of florid sanguine Constitutions, on whatever Occasions it may be necessary to them. The *European* Physicians esteem it a good Medicine in Convulsions, Vertigoes, and all nervous Complaints, and recommend it as one of the best Restoratives known. Its Dose is from ten Grains to twenty in Powder, and from one Dram to two, to the Pint in Infusion.

C H A P T E R XXI.

N I N Z I N.

AF T E R a Chapter bestowed on the Root Ginseng, many will wonder at seeing another with the Word Ninzin at the Head of it : But we have already observed, that though Ginseng and Ninzin are too generally used as synonymous Names, and the Roots expressed by them are supposed to be the same, they are in reality the Names of two very different Roots, belonging to two Plants of very different *Genera*. It is the Interest of the Druggists that Ninzin and Ginseng should be supposed the same Root, because the Ninzin comes much cheaper to them : But it is by no means the Interest of the Person who pays the Price of Ginseng, and expects to be benefited by its Virtues, to have a Root of inferior Value sold in its Place.

Ninzin is an oblong Root, larger and thicker than Ginseng, and of a more lax and spongy Structure ; it is usually met with about four or five Inches long, and half an Inch in Diameter, sometimes considerably more. It is of the Shape of a small Parsnep, largest at the Top, and gradually growing smaller to the Bottom ; it generally runs down all the Way single, but sometimes is divided into two or more Branches toward the Bottom. Much of the Ninzin we meet with is of this divided Kind ; for the *Chinese* know we look upon the Division of the Root, as one of the Characters of Ginseng, and therefore send

us over few but the divided Roots of this Plant, which they would have us think the same with the other. The Ninzin has a tolerably smooth Surface, but always is marked with a Number of slight annular Furrows, which run either in Part, or perfectly round it at certain small Distances; and it has generally a Number of Fibres growing to its Bottom. It is much lighter than the Ginseng in Proportion to its Size, and is soft and easily cut through with a Knife, and does not look glossy where fresh cut; but if closely examined, is found to be full of Pores, and more spongy in the Middle than elsewhere. It is of a pale brown, often of a whitish Colour on the Surface, and has something of a yellowish Tinge within. It has a somewhat aromatic and sweet Smell, and in Taste is acrid and aromatic, but has much less of the bitter in it than the Ginseng. Ninzin should be chosen sound, firm, and somewhat tough, not brittle or dusty, and of an agreeable Smell. There is no Danger of its being adulterated, but great Care is to be taken in the buying of Ginseng, that this Root is not used to adulterate that.

The Ninzin has been known in *Europe* no longer than the Ginseng; and indeed, we can hardly say it is yet known as a distinct Root from it. Monsieur *de Jussieu* is the first Person who has set the Descriptions and Accounts of the Authors who prove it together; and he is by many [thought even at this Time to be in an Error about it; but the People who suppose that, neither know the Author nor the Subject. The true Ninzin for Medicinal Use is collected on the Mountains of *Corea*. They have taken great Pains to cultivate it in their Gardens in *Japan*; but the Root is found to want, after this Treatment, the Virtues which it possesses in its native State.

The Plant which produces the Ninzin is of the Number of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. *Ray*. It is called by the *Chinese* and *Japonese* *Sju*, *Sjin*, and *Nisji*, *Nindsin*, and *Dsindsom*, and plainly *Som*; the *Tartars* call it *Soasai*. Not one of these Names is ever given by the *Oriental*s to the true Ginseng, which is only called by that Name, and by that to *Pe Tsi*. The Ninzin Plant is described by *Kempfer* in his *Amœnitates exoticæ*, under the Name of *Sisfarum Montanum Coreænse radice non tuberosa*, and by *Linnaeus*, is made a Species of *Sium*. According to all these Authors it differs greatly from the Ginseng Plant, which is bacciferous; whereas this bears two dry Seeds after each Flower which are joined together in the Manner of those of the ordinary umbelliferous Plants. The Plant grows to two or three Feet high; the Stalk is as thick as a Man's Finger, full of large Knots and pretty deeply striated. The first Leaves are simple, the succeeding ones pinnated, and like those of the *Sium*; the Flowers are small and white, and stand in Umbels; and the Seeds which succeed to them are like those of the common Anise. The Plant propagates itself very plentifully; for beside that there are continually new lateral Roots produced on every Side the old one, and that the Seeds are very numerous; there are a Sort of Germs in the *Axæ* of the Leaves like those of our *Dentaria* and other Plants, which when they fall to the Earth take Root and become so many new Plants.

The Roots are gathered for Use in the Beginning of Winter; when they are taken out of the Earth, they are thrown into fair Water and left to steep in it for three Days: They are afterwards hung up in the upper Part of a large Vessel, in the lower Part of which there is a large Quantity of Rice or Mil-

let Seed and Water; the Vessel is cover'd, and the Liquor being made to boil, the Roots receive the Fumes of it, and when they are dry'd afterwards, they become hard, and somewhat pellucid; they acquire also a brownish or ferrugineous Colour in this Process.

The *Chinese* and *Japonefe* are extremely fond of this Root, they esteem it inferior indeed to the *Ginseng*, but more than equal to any other Drug. They give it as a restorative Cordial, and Provocative, and esteem it the best of all Medicines in Fevers; in short, they attribute to it all the Virtues of the *Ginseng*, but they acknowledge that it possesses them in a less Degree.

C H A P T E R XXII.

C U R C U M A,
Turmerick.

TURMERICK is a small Root of an oblong Figure, we usually meet with it in Pieces from half an Inch to an Inch or two in Length, and at the utmost scarce so thick as a Man's little Finger: Its Surface is uneven, and rises into Tubera or Knobs in many Places, and the longer Pieces are seldom very strait; it is considerably heavy, and very hard to break; it does not cut easily through with a Knife, and when cut it leaves a fine glossy Surface. Its Colour externally is a pale whitish grey, with some faint Tinge of Yellowness, and when broken it is throughout of a fine yellow within; this Colour is bright and pale, and without Admixture when the Root is fresh, but in keeping it by Degrees becomes more and more reddish, and at length is much like that of Saffron in the Cake. Thrown into Water it very speedily gives it a fine yellow Tinge, and chew'd in the Mouth it gives the same Colour to the Spittle. It is easily powder'd in the Mortar, and according to its different Age it makes as yellow an Orange colour'd or a reddish Powder. It has a kind of aromatic Smell, with something of the Odour of Ginger in it; to the Taste it is acrid and disagreeable, and has a considerable Bitterness.

Turmerick is to be chosen fresh, sound, and firm, of a sharp Taste, hard to be broken, and of a pale yellow within; when of a dusky Colour it is always old, but what is most to be avoided in it, is the being worm-eaten, dusty, and brittle, which is not uncommonly the Case. Turmerick was not known to the Antients, at least we are not certain that they mean this Root, by any of the Names in the List of their *Materia Medica*. We have it from *Java*, *Malabar*, and many other Parts of the *East-Indies*.

The Plant which produces it is of the number of the *Monandria Monogynia*, according to the *Linnean* System, and of the *Herbæ bulbosæ affines* of Mr. Ray. It is described in the *Hortus Malabaricus* under the Name of the *Manjella Kua*, and by *Herman* under that of *Kaba*. The Leaves are a Span long, and three or four Inches broad, of a fine green Colour, and pointed at the End. The Flowers grow on peculiar Stalks, of eight, ten, or more Inches high, and of the Thickness of a Goose Quill; they are collected in a Kind of squamous Cone, and are of an oblong Figure, resembling those of the *Cannacorus*, but vastly smaller, and are of a pale reddish Colour; these are succeeded by tri-capsular Seed-Vessels, containing a Quantity of small roundish Seed.

The People cultivate it in all their Gardens, they dig up the Roots for Use soon after the Flowers are fallen; and beside the Quantity that they send over dry'd to all Parts of *Europe*, they use a great deal in their own Sauces and Foods.

Turmerick is found, on Analysis, to contain a large Quantity of a volatile oily Salt, and a bitter saline one join'd together, and blended among a large Quantity of a viscous Matter and Earth. It is an excellent Remedy in Obstructions of the Viscera, particularly of the Liver and Spleen; it also promotes the Menfes, and forwards Delivery. The Case however in which it is of most eminent Use is the Jaundice, in which it is often singly a Cure. It is given in Substance reduced to a fine Powder, from five to fifteen Grains or more for a Dose, and in Decoction from one Dram to three to the Pint.

Besides its medicinal Use, it is of great Service in Dying, and in many of the other Arts. The Glovers use it to colour their Leather; and the Turners to give an agreeable Yellow to several of their Works made in the whiter Woods.

The Turmerick we have hitherto been describing is call'd by some *Curcuma longa*, or long Turmerick, by way of Distinction from another Species call'd *Curcuma rotunda*; and by the *Portuguese Ravide Safrao*, but which is not met with in our Shops. This is not properly a round Root, but it is of the tuberous Kind, and is brought over in irregular, short, thick Lumps, often indeed approaching to a roundish Shape; these are of the Size of a small Walnut, seldom much larger, nor often much smaller than this Standard. They are of a close, firm Texture, not easily broken, of a dusky yellowish Colour on the outside, and when cut transversely of a mix'd yellowish and reddish, or more properly speaking, they are composed of a number of Crufts, forming concentric Circles, some of which are yellow, some Orange Colour, and some reddish: Its Taste is much the same with that of the other, but weaker, and its Virtues are of the same Kind, but it possesses them in a more remiss Degree.

The Plant which produces the *Curcuma rotunda* is of the same Genus with the other. It is described in the *Hortus Malabaricus* under the Name of *Manja Kua*.

C H A P T E R XXIII.

R A D I X P Æ O N I Æ,

Piony Root.

THE *Radix Pæoniæ* is of the number of the tuberous Roots, and grows to a considerable Bigness: We meet with it in long and irregular Pieces, of four or five Inches in Length, and of the Thickness of an Inch or more; the Surface is smooth and even, and the Colour a dusky brown on the outside, and a somewhat paler brown within; it is of a considerably firm Texture, fleshy, and easily cut with a Knife, considerably heavy, and of a sweetish but disagreeable Taste, but of no remarkable Smell.

The Plant which rises from it is one of the *Polyandria Digynia* of *Linnaeus*, and one of the *Herbæ multifloræ sive Corniculatæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Pæoniæ mas*, *Pæoniæ præcocior*, and *Pæoniæ folio nigricante splendido*. It is frequent in our Gardens, and flowers in May. There are some other Kinds of Piony cultivated in our Gardens also for the Beauty of their

their Flowers, but this is the proper Kind for medicinal Use. The Leaves are large and of the ramose Kind, of a dark green Colour, almost black, and of a smooth and glossy Surface; the Stalks of these are commonly reddish at the Bottom; the main Stalks rise to about two Feet high, the Flowers are large and single, of the Bigness of a Rose, and of a fine bright red Colour, with yellow Antheræ on their *Stamina*, in the Middle like those in the Rose; in the Place of these there afterwards appear four large Seed-Vessels, of a pale whitish green, and cover'd with a fine soft Down; these turn back and open when the Seed is ripe, and are of a fine Scarlet Colour within; the Seeds are of a shining black, and as large as small Pease.

Piony Root, chemically analysed, yields first a moderate Quantity of a colourless Phlegm, of an herbaceous Smell, and of a slightly saline Taste; after this comes over a large Quantity of a still colourless Phlegm, of an acid, and toward the End of an austere Taste; then a reddish Liquor, of a strong empyreumatic Smell, containing a volatile alkaline Salt; after this comes a small Portion of a brownish Oil. The Remainder in the Retort is a light black Coal, which calcin'd in an open Fire and lixiviated, yields a fix'd alkaline Salt, in the proportion of about two Scruples from the Pound of the Root first used.

The Root of the Male Piony is a very celebrated Medicine in nervous Cases. We have Instances well attested of Epilepsies cured solely by it; it is good also in all Disorders of the Head and Nerves, and in hysteric Complaints; it promotes the Menses, and is good against Obstructions of the Viscera. At present however it is rarely prescribed singly, but is kept in the Shops as an Ingredient in some of the old Compositions, as the *Pulvis ad Guttetam*, and the like.

CHAPTER XXIV.

RADIX ARI, *Arum Root.*

THE *Radix Ari* is a small tuberous Root, its usual Size is that of a Walnut, its Shape is irregular, but often approaching to round, tho' as frequently oblong and flatted a little; its Surface is very rough and uneven, wrinkled in some Places, and rising into Protuberances in others. It is light and of a loose Texture, very soft and easily cut, or even crush'd to Pieces in the Hands. Its Colour on the outside is a dusky brown with some Cast of reddish in it, within it is perfectly white as Snow, when dry'd it powders easily, and the Powder feels soft and farinacious, but the greatest Part of its Virtue is thus lost, the fresh Root has no very remarkable Smell, but it is of an extremely acrid and pungent Taste, so as not to be endured upon the Tongue.

It is to be chosen fresh, large and firm, not soft and flabby, which is a Sign of a beginning Decay.

The Plant to which it belongs is one of the *Gynandria Polyandria* of *Linnæus*, and one of the *Herbæ bulbosæ affines* of Mr. Ray. It is extremely common under all our Hedges, and is known in *English* by the Name of Wake Robin, and Cuckow Pint; the botanical Writers all describe it under that of *Arum*, *Arum vulgare*, and *Arum non maculatum*. The Root lies deep in the Ground,

Ground, and has Fibres growing from several Parts of it. The Leaves are large and somewhat of the Shape of an Arrow Head. The Stalk bears a green foliaceous Case, with a red or yellow fleshy Pistil in it, and finally at the Root of this stand a Number of Berries after the Flower is fallen.

A Pound of fresh *Arum* Roots, distill'd in a Retort, yield first about two Ounces of a limpid Phlegm, of a somewhat herbaceous Smell and Taste, sub-acrid and somewhat austere withal, and in which an accusom'd Palate may distinguish a latent volatile Alkali; after this come over between twelve and thirteen Ounces of a Liquor colourless at first, but afterwards reddish, of an austere subacid Taste and empyreumatic Smell, and toward the End of a dusky brown Colour, and very acrid and acid Taste; after this a few Drops only of a reddish Liquor highly impregnated, both with an acid and a volatile alkali Salt, and about five Drams of a thick Oil like Butter. The Remainder in the Retort is then a black Coal weighing little more than an Ounce, and from this about a Scruple or a little more of a fix'd alkaline Salt may be prepared by the common Method of Lixiviation.

The fresh Root of *Arum* is so extremely acrimonious, that in the Spring time when full of Juice, if only slightly tasted, it leaves a painful Sensation on the Tongue for many Hours. The Acrimony of this Root, like that of Scurvy Grass and some other Plants, seems to consist in an extremely volatile Oil, for on drying its external Parts lose their Acrimony very quickly, and are often wholly insipid, while the middle Part is yet very acrid; but this also grows insipid soon after. It is best used fresh for all Purposes, where any Dependence is laid on it: in this State it powerfully incides and attenuates the tough viscous Humours, which lodge on the Coats of the Stomach and Intestines, and on this Score it becomes a powerful Restorer of the Appetite that has been taken off by this Means.

On the same Principle of attenuating and resolving the tough Humours in the *Primæ viæ*, &c. it often cures Agues, and it is by some greatly recommended in a moist Asthma, and in all Infarctions of the Lungs. Its Power of opening Obstructions of the Viscera makes it very serviceable also in Jaundices, Chloroses, and many chronic Maladies, and it is given with Success in melancholy, hypocondriac, hysteric, and scorbutic Cases, and in fine in all Complaints where a tough State of the Humours is the Cause. With so many Virtues, confirm'd by the Experience of so many Authors of Credit, as might easily be quoted in support of them, nothing could make this Root neglected but its being too common. We seem to imagine Medicines acquire their Virtues in long Voyages, and are extravagantly fond of Drugs of very little Power brought from the *East-Indies*, while we neglect this and hundreds of others greatly more valuable that grow under our own Hedges: the crude *Arum* Root may be given in Boluses, from a Scruple to two or more for a Dose for Obstructions of the Viscera; in Asthmatic and other Cases where the Lungs are stuff'd and clogg'd with a viscous Phlegm, a Decoction of it made into a Syrup with Honey is excellent. It greatly promotes Expectoration, and brings up Matter that the Patient would not have been able otherwise to get up. Some have given it in large Doses, and declare it an excellent Purge in all chronic Cases. *Tragus* greatly commends the fresh Root of *Arum* against Poisons and even in the Plague; *Mesue* recommends Cakes baked of equal Parts of
Flower

Flower and Pulp of *Arum* Root for the Piles, and *Dolæus* gives it great Praise mix'd with equal Parts of Flower of Brimstone in almost all Disorders of the Lungs.

Some have pretended to mitigate or obtund the Acrimony of *Arum* before they give it internally, but this is no better than robbing it of its Virtues; we know it to be safe in its natural crude State, and that the macerating it in Vinegar as some propose, destroys its active alkaline Salts, and that in the other Case of separating the *Fæculæ*, or subsiding white Matter from the Juice, and drying it, the greater Part of what we expect Benefit from is lost.

C H A P T E R XXV.

RUBIA TINCTORUM,
Madder.

MADDER is one of the long and small Roots, distinguishable from all the others by its remarkable red Colour and firm Texture. It is brought to us in Pieces of four, five, or more Inches in Length, but seldom in the thickest Part exceeding the Bigness of a Goose Quill. Its Surface is wrinkled with a Number of Furrows running principally in a longitudinal Direction; it is light, tho' of a firm Texture, and for a Root of that small Size not easily cut. Its Colour is a strong but somewhat dusky red, both on the outside and within, but somewhat brightest where fresh cut. It has very little Smell, but it is of a very remarkable Taste, and distinguishes plainly in it a Mixture of sweet and bitter, and a very manifest Astringency with this.

Madder is to be chosen in long and thick Roots found throughout, hard to be broken in any Part, and when cut of a good Colour. It is not subject to Adulterations, so that if it be found and well dry'd it is always good, unless it have been kept too long, and this is easily discover'd by its wanting Taste.

Madder is cultivated in vast Quantities in several Parts of *Holland*, the *Dutch* supply all *Europe* with it, and make a vast Advantage of the Trade in it; it is very wonderful that no other Nation has attempted the cultivating it; there is no doubt but it would succeed very well in *France*, *Germany*, or with us, and much Ground might be employ'd this way to ten times the Advantage that it is at present. What the *Dutch* send over for medicinal Use is in the Root, which is only dry'd and sent over without any Preparation; the greatest Quantity however is used by the Dyers: This they usually send in coarse Powder ground in Mills; they make two Kinds of this ground Madder, the one is the whole Root ground just as taken out of the Earth and dry'd, the other is clean'd from the cortical Part, which is of a duskier Colour than the rest, and then ground to Powder. This is distinguish'd from the other by its being of a paler and more agreeable Colour.

The Plant which produces the *Rubia* Root is of the Number of the *Tetandria Monogynia* of *Linnaeus*, and one of the *Herbæ stellatæ* of Mr. Ray. It grows to two Feet high; its Stalks are square and rough; its Leaves are oblong and narrow, and stand four at a Joint in manner of a Star. Its Flowers grow in Clusters at the upper Part of the Stalks, and are very small, and of a pale yellowish green Colour; these are follow'd by a Fruit consisting of two Seeds. It has been.

been described by all the botanical Writers under the Name of *Rubia Sativa*, and *Rubia Tinctorum*.

The Root is an Attenuant and has the Credit of being a Vulnerary of the first Rank. It is at present given with Success in chronic Cases where there are Obstructions of the Viscera. It promotes the Menses and Urine, and is good in Jaundices, Dropsies, and Obstructions of the Spleen. Its Dose is from five Grains to fifteen, but it is seldom given singly. It frequently makes an Ingredient in Infusions and Decoctions, among other Medicines of the same Intention, and it gives these an elegant Colour.

It is also used in great Quantity by the Dyers for red and other Colours.

CHAPTER XXVI.

ANCHUSA,

Alkanet.

ALKANET is one of the long Roots, remarkable also for its red Colour; it is of the Number of those that penetrate deep into the Ground, and is sometimes single, sometimes branch'd toward the End; we meet with it in the Shops sometimes in the entire Root, but more frequently with the top and bottom cut off; it is five or six Inches long, and from the Bigness of a Man's little Finger to three quarters of an Inch in Diameter; in the thickest Part its Surface is rough and furrow'd in various Directions; it is of a tolerably firm Texture within, yet not very heavy. It cuts pretty easily and is of a dusky red Colour on the Surface, and pale sometimes almost white within. The cortical Part is indeed all that is valuable of it, as having not only all the Colour, but all the medicinal Virtues; and if we were careful enough on this Occasion, we should have this separated from the woody Part within, for Use. It has but little Smell, but is of an austere and astringent Taste.

Alkanet is to be chosen firm, sound, and not in large Roots, for the smaller have the most cortical Part, in which all that is valuable in the Root lies. Care is to be taken that it is not dusty, which is a Sign of Decay.

Alkanet has been known in Medicine and in dying from the earliest Times we have any Accounts of. *Theophrastus* mentions it several Times, and *Dioscorides* describes three Kinds of it; one of these he speaks so little of, that it is not easy to determine what he means by it; some have supposed Echium, and some Bugloss, but with no Foundation, since they want the great Character, the redness of the Root and its staining Quality; this is his first: his second Kind seems plainly enough our *Anchusa*, or Alkanet; and his third another Plant of the same Genus very well known among us by the Name of *Anchusa lutea*, or yellow Alkanet, and *Symphytum Echii folio, radice rubra*.

These are the Roots of Plants of the Number of the *Pentandria Monogynia* of *Linnaeus*, and of the *Herbæ asperifoliae* of Mr. Ray. The Plant which affords the common *Anchusa* of our Shops, is described by all the old Authors under the Name of *Anchusa purpurea*, and by *Tournefort* under that of *Buglossum radice rubra*. It grows to a Foot or two in Height, the Leaves are rough and large, and stand alternately on the Stalks; the Flowers are small and purplish or bluish, and are succeeded each by four Seeds growing together. It is cultivated

tivated in many Parts of *France* and *Germany*, and we receive it in large Quantities from both Places : There is also an Alkanet brought from the *Levant*, but that is not a Root in its natural State, but a Roll made up by Art. Alkanet very readily tinges any Fluid, especially of an oily Kind, with a fine red Colour, whence it has been used to tinge Lip-Salves, and other things. It is an Astringent, and has also the Credit of being a very great Vulnerary, Alexipharmic, and Uterine : It promotes the Discharges by Urine, and is given with Success in nephritic Cases. *Boerhaave* recommends it in Decoction to stop Diarrhœas ; it gives a good Colour to the common white Drink, and is an excellent Addition to it in Point of Virtue ; it has even a Custom to tinge *Petroleum* and Oil of Turpentine with it, to disguise what they were from the Vulgar, and to encrease their Virtues as Vulneraries. Many have made it a Custom to give the *Lucatellus* Balsam that red Colour it is expected to have, by boiling this Root in the Oil, instead of loading that Medicine with the Powder of *Saunders* Wood. Others have done the same with *Sanguis Draconis*, but if the Colour be all that is required, the *Anchusa* is preferable.

C H A P T E R XXVII.

PAREIRA BRAVA.

PAREIRA BRAVA, call'd also by some *Butua*, and *Brutua*, is an oblong and large Root : We meet with it in Pieces of five, six, or more Inches in Length, and from half an Inch to three Inches or more in Diameter. It is of a rounded Shape, and in Pieces of any Length goes gradually tapering from one End to the other, though the Decrease in Thickness is very gradual. Its Surface is rough, and wrinkled in various Directions ; a number of longitudinal Furrows appear on it, and these are cross'd by several annular or circular ones. It is of a somewhat porous and spongy Texture, not very heavy, but considerably hard and woody, very tough, and not easily to be cut with a Knife : It is of a dusky brown Colour on the Surface, and of a yellowish Hue within ; and is composed of a number of longitudinal Fibres, which easily enough split and separate from one another in small Congeries : When the Root is cut transversely, it appears of a kind of cavernous or spongy Texture in all Parts, and shews a number of concentric Circles, all intersected with Rays of Fibres running from the Center to the Circumference. The Root is seldom perfectly strait, very often twisted, and contorted in a very singular manner, and is so hard and woody, that it has much more the Appearance of a Piece of Stick, or a Segment of a Branch of a Tree, than of a Root, and might easily have been mistaken for such, by the People who first received it from abroad, had not those who brought it, and were inform'd of its Nature, declar'd otherwise. It has no Smell, but has a very remarkable Taste, composed of a Bitterness, with a manifest Sweetness like that of Liquorice among it. It is to be chosen sound, firm, and hard ; it is not very apt to decay, but sometimes it is met with dusty and worm-eaten, in which Case it is to be rejected.

Pareira Brava has been but very lately known in Medicine, the Discovery of it to us is owing to the *Portuguese* ; none of the antient Authors were acquainted with

with it, or indeed have described any Root that at all resembles it, either in Form or Virtues. *Boutoua* is its original *Brasilian* Name, and from thence we have form'd *Butua*, *Brutua*, and *Ambutua*; they call it also *Membroeq*. The *Portuguese* gave it the Name of *Pareira Brava*.

We have this Root from the *Brasils*, but its true History is at this Time one of the *Desiderata* in the *Materia Medica*. The *Portuguese* tell us the Plant is a kind of wild Vine, but this is so indeterminate a Phrase as to convey no Idea; for all the climbing Plants have been call'd by that Name: Neither *Piso* nor any other Author has describ'd it, at least not under any Name we can know it by. *Herman* mentions something as a Wood under the Name of *Butua* and *Ambutua*, and probably enough means this Root by it; but his Account is obscure, uncertain, and of no Use, as to the determinating the Plant it belongs to.

The *Portuguese*, who learn'd the Virtues of this Root from the Natives of the *Brasils*, tell us it is a noble Diuretic, Lithontriptic, Vulnerary, Stomachic, Cordial, and Alexipharmic, but this is going too far in its Praise, and yet omitting some of its real Virtues. It is certainly a Diuretic of no inferior Kind, and has done great Service in nephritic Cases, and in Plurifies and Quinzies has been attended with more Success than almost any Medicine we know of singly. In Suppressions of Urine scarce any thing is more efficacious, or more instantaneous in its Effect, but it is Folly to infer from this that it will dissolve the Stone. When the Complaints of nephritic Patients arise from a mucous Humor, stopping up the Passages in the Kidneys, &c. and retaining small Concretions of Gravel, or little Stones among them; this Medicine, which is one of the greatest known Attenuants, dissolves the mucous Humour, and expels all the stony Matter not yet form'd into large and hard Masses with it. Such Masses it certainly has no Power to affect at all. In Cases of Ulceration of the Kidneys or Bladder, when the Urine is purulent and voided with great Difficulty, there is scarce any thing equal to this Root as a Remedy, the Urine flows copiously after the Use of it, and becomes more limpid, and the Ulcerations are destroy'd; and finally, on giving a little Balsam *Capivi* mix'd with it, they are soon healed.

Geoffroy, who delivers great things of the *Pareira Brava* on his own Experience, adds, that in humoral Asthmas arising from a glutinous Phlegm, obstructing the Bronchia, and almost choaking the Patient, after all other Methods try'd in vain, this Root has promoted an Expectoration and made a Cure; and the same Success he has had with it in Jaundice, arising from a thick and grumous State of the Bile, and he recommends it greatly in Gonorrhœas, mix'd with Balsam *Capivi*. Its Dose is from twelve Grains to half a Dram in Powder, but the more usual Way of giving it is in Infusion or Decoction: In this Way two Drams of it will serve for a Decoction, to be taken at about three Doses: In Gonorrhœas it is best given in Powder mix'd into a Bolus with Balsam *Capivi*, or with that and *Calomel*, with some thick Syrup to give it Form.

Beside the true *Pareira Brava* above described, there is another Kind, call'd from its Colour, the *Butua alba*, or *Pareira brava alba*. It is a woody Root like the former, but its bark is less wrinkled, and is of a dusky white Colour, with a Cast of reddish in it; it is yellowish like the former within, and has the same

same bitterish Taste, but less strong. It is said by the *Portuguese* to possess the same Virtues with the former, but in a more remiss Degree.

C H A P T E R XXVIII.

C Y P E R I.

WE have two Roots in the Shops under the Name of *Cyper*, distinguished by the Epithets *longus* and *rotundus*, the long and round; they are both of the same Nature and Qualities, and both are Roots of Plants of the same Class, tho' very different in Species.

CYPERUS LONGUS,

Long Cyperus.

The long Cyperus is an irregular shap'd Root, of the creeping Kind: We meet with it in Pieces of three, four, or more Inches long; these are usually from less than half an Inch to near an Inch in Thickness; it is not strait, but usually variously contorted and bent, and seems jointed in several Places, and is full of Fibres, knotty, and often flattish: Its Surface is uneven and wrinkled, the Furrows running principally lengthwise of the Root, and forming irregular Lines on it; it is considerably firm and tough, of a tolerably close Texture, and very difficultly broken, though it cut tolerably easily with a Knife. It is moderately heavy, and is of a dark blackish Colour on the outside, but whitish within; it is of a very fragrant Smell, especially when fresh broken, and somewhat resembles the *Indian Spikenard* in it; its Taste is aromatic and acrid, but agreeable. The long Cyperus is to be chosen in large and sound Roots, such as are not too much wrinkled on the Surface, and are very fragrant to the Smell. The antient *Greeks* were very well acquainted with the Cyperus Roots in general, but it appears odd, that they did not distinguish them into the long and round Kind, though they occasionally mention some of them, as being of the long Form; and *Pliny* tells us, that the *Romans* sometimes call'd the Cyperus Roots, when of this Shape, *Cyperida*. The long Cyperus is now principally imported from *France* and *Germany*.

The Plant which produces it is one of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ graminifoliae non Culmiferæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Cyperus longus*, *Cyperus panicula sparsa speciosa*, and *Cyperus longus odoratior et habitior*. The Leaves are long and grassy, the Stalks rise to two, three, or more Feet high, and the Flowers are of the staminateous Kind, and are arrang'd in squamose Heads, all growing from the same Part of the Top of the Stalk, and having under them a small number of little Branches, disposed in manner of a Star.

The Seeds are hard, and of a triangular Figure; the Plant always grows in wet Places, and about the Banks of Ditches and Rivers, where its Roots spread every Way in great abundance.

CYPERUS ROTUNDUS,

Round Cyperus.

Round Cyperus is a Root of the tuberous Kind, composed of roundish Knobs, join'd several one to another by slender Filaments. We sometimes meet with the *Tubera* thus connected in the Shops, but we more usually see them

them loose and without the Fibres, to which they had naturally adhered, and by which they had been fasten'd to each other.

The Knobs themselves are usually of a roundish Figure, though seldom regularly or perfectly round; they are of various Sizes, from that of a Nutmeg to the Bigness of a large Walnut, but we most usually meet with them of the Size, and of much of the Shape of large Olive: They are rough, and uneven on the Surface, furrow'd considerably deeply, and that very irregularly; they are of a tolerably firm and compact Texture, and moderately heavy; not easily broken, but cutting pretty readily under the Knife: They are of a deep dusky Colour, approaching to black, but often with something purplish in it on the Surface, and they are whitish within; they are of a very fragrant and agreeable Smell, and of an aromatic and acrid, but a somewhat agreeable Taste.

The round Cyperus is to be chosen in moderately large Roots, firm but not tough, which is always a Sign of their having been kept too damp, and not too much wrinkled on the Surface; they are to be of a fragrant Smell and not worm-eaten.

The round Cyperus is brought to us from the *East*, by the Fleets trading to the *Levant*: It is frequent in *Ægypt* and *Syria*. The Plant which produces it is of the same Class with that which affords the long Cyperus, and is described by *Caspar Bauhine* under the Name of *Cyperus rotundus orientalis major*, by *Rauwolf* under that of *Cyperus orientalis rotundus major sive Babylonicus*, and by *Prosper Alpinus*, in his Book of *Ægyptian* Plants, under that of *Cyperus Hodueg Ægyptis*. The Plant is extremely common on the Banks of the *Nile*, as well as in almost all the wet Places throughout the *East*: Its Leaves, Flowers, and Seeds resemble those of the former: Its Root consists of a multitude of Fibres, or Filaments, every one of which is at certain Distances loaded with those Tubera or Knobs, which we call round Cyperus.

The Root call'd by some of the old Authors *Radix Sanctæ Helenæ*, and Saint *Helen's* Beads, and by *John Bauhine* taken to be a Species of *Galangal*, is also of the Cyperus Kind. It is common to many Parts of the *East*, and of *America* also; and is described by Father *Du Tertre* under the Name of *Cyperus Americanus*, and by *Hernandez* under that of *Apogomatli sive Phatzi firanda*. *Ligon* calls it *Scirpus Americanus caule geniculato cavo*. The Roots of this much resemble those of the common round Cyperus of the Shops, but they are paler colour'd and less wrinkled. They are not at present however met with in our Shops, nor need we be at the Trouble of importing them, since their Virtues are the same with those of the other Cyperus's.

The Roots of all these three Kinds of Cyperus are Attenuants; they open Obstructions of all Kinds, promote Urine, and the Menfes; are good Stomachics, and are of singular Service in the first Stages of a Dropsy. *Hoffman* commends them also very greatly in Disorders of the Lungs and Breast. They are recommended by many as excellent in Case of Ulcerations in the Kidneys and Bladder; and so long since, as in the Days of *Hippocrates*, they were given in Ulcerations of the *Uterus*. The Seeds of the *Cyperus longus* sometimes are found among the Rice brought from different Parts of the World. There is a general Opinion among Authors, that this Seed inebriates those who take it, but upon how good a Foundation nobody knows at present.

The round and long Cyperus have formerly been made Ingredients in many of the officinal Compositions, but at present they are got into Disuse.

CHAPTER XXIX.

RADIX ANGELICÆ,

Angelica Root.

ANGELICA is a Plant whole Leaves, Stalks, Seeds, and, in short, every Part of which are in Use in Medicine; but the Root, of which we are to speak in this Place, possesses the Virtues of the Plant in a more eminent and agreeable Manner than any other Part, and deserves to be most esteemed of any. It is a large and oblong Root, gradually tapering or growing smaller from the Head downwards, and in the lower Part full of Fibres: It is, when well grown, about an Inch or Inch and half in Diameter at the Head, and four, five, or six Inches in Length. Its Surface is rough and corrugated with Furrows running in all Directions. It is of a lax spongy Texture, very light and easily cut through with a Knife, and when cut it does not exhibit a glossy Surface, as many of the harder Roots do. It is of a dusky brown on the outside, and white within; of a very agreeable perfumed Smell, and acrid and somewhat bitterish, tho' upon the whole very aromatic and pleasant to the Taste. It is used most frequently fresh as taken up out of the Earth, sometimes dried; when in the former State it is to be chosen heavy, succulent, and of a good Smell, firm to the Touch, and of as little wrinkled a Surface as may be. When dry, on the contrary, it is to be chosen the lightest and most fragrant that can be had, and great Care is to be taken that it be not rotten, worm-eaten, or dusty.

Some Authors have been of Opinion that *Dioscorides* means our Angelica by his *Sylphium*, others take his *Smyrneum* and *Panax heracleum*, and others his *Myrrhis* to be it: But they seem to have most Reason on their Side, who suppose it to be neither of all these, but to have been absolutely unknown to the Ancients.

The Plant which produces the Angelica Root is of the Number of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. The Species whose Root we use is that commonly cultivated in our Gardens, and which bears the globose Umbel. It rises to six or seven Feet high; its Leaves are large and composed of many smaller ones, and its Stalk very thick and hollow. Every Part of it is very fragrant.

We have Plenty enough of this at Home, and take up the Roots in great Abundance to be used fresh; but what our Druggists have in the dried State, are brought from the *Alps* and *Pyrenean* Mountains, and in great Quantity from *Bohemia*. Notwithstanding the Disadvantage of these Roots being brought from so great a Distance, and their being so very liable to Damage and Decay in keeping, they are much more fragrant than our own when dried upon the Spot. We might suspect that the *Bohemian* was a different Kind of Angelica from ours by this, but that the Specimens of the Plant prove it to be the very same: The only Difference therefore must be in the Soil and Climate. From four Pounds fourteen Ounces of fresh Angelica Root chemically analysed,

analysed, there have been procured ten Ounces of an urinous Phlegm ; three Pounds six Ounces of an acid Phlegm, and an Ounce of Oil of partly a thinner and finer, partly a thicker and coarser Kind. From the remaining six Ounces and a half of *Caput mortuum*, more than three Drams of a pure alkaline Salt may be separated. There appears no volatile Salt in a concreted Form from this Process with the Root, but the Leaves treated in the same Manner yield a few Grains of it.

Angelica is stomachic, cordial, and sudorific, and is greatly recommended against pestilential Diseases, and the Plague itself, but the Virtues ascribed to it on this Account are somewhat too great. It has been made an Ingredient in many of our officinal Compositions ; but the late Dispensatory of *London*, has omitted it in many of them : They have however retained the Leaves of the Plant in the *Aqua Alexiteria Simplex & Spirituosa*, and in that *cum Aceto*, which is intended to serve in the Place of the Treacle Water of the former Dispensatories. The Stalks make a very pleasant Sweetmeat preserved with Sugar, and this is a very good Way of taking Angelica on many Occasions.

CHAPTER XXX.

PYRETHRUM, *Pellitory of Spain.*

WE meet with two different Roots in our Shops, under the common Name of *Pyrethrum*, and much resembling each other in their Nature and Qualities, as well as in the Plants they belong to. To these the *French* Druggists, and those of some other Nations, add also a third, very different from both, much inferior to both in Virtues, and the Root of a Plant of a very different *Genus* : The two first being Roots of Herbs of the corymbiferous, and the last of one of the umbelliferous Tribe.

Of the two former, one however is so much more frequent with us than the other, that it may be called the common *Pyrethrum*, and is what our Druggists in general sell under the Name of *Pellitory of Spain*.

This is a small and firm Root : it is of an oblong Form ; its usual Size is about two or three Inches in Length, and from a Quarter of an Inch to a little more in Diameter. It is thickest at the Head or Top, from whence it gradually tapers or grows thin all the Way to the other End. Its Surface is very much corrugated or wrinkled, the Furrows running in all Directions, but principally longitudinally. It is naturally of a tolerably firm and somewhat tough Texture. It is moderately heavy and not very hard ; it cuts tolerably easy with a Knife, and shews a glossy Surface where cut. It is of a dusky brown Colour on the outside, and when broken it appears whitish within, and of a somewhat open or spongy Grain. It has usually some Fibres, though not many, adhering to it when fresh ; it powders tolerably easy in the Mortar ; it has no particular Smell, but is of a violently acrid and pungent Taste.

Pyrethrum is to be chosen in the largest and perfectest Pieces that can be had, sound and firm, not brittle and dusty, which are Signs of its Decay, it being very subject to be worm-eaten. The Taste of the Animals that feed on such acrid Substances as this is somewhat singular ; but we find evidently
enough

enough that there are such. Ginger in the same Manner is subject to be eaten by another Insect, and in general the hottest things almost most of all.

Pyrethrum was well known to the Ancients, and has long been in Use among us; we have it from the *East*, principally from *Tunis*, in the Neighbourhood of which Place it is extremely common. The Plant which affords it is of the Number of the *Syngenesia Polygamia superflua* according to the *Linnean* System: It is one of the *Herbæ corymbiferae* of Mr. Ray: *Skaw* has described it under the Name of *Chamæmelum specioso flore radice fervida longa*, and *Linnaeus* under that of *Bupthalmum caulibus simplicissimis unifloris foliis Pinato multifidis*, *Hort. Clifford. p. 414.* The whole Habit of this Plant somewhat resembles Camomile; the Leaves are divided into small Segments; the Stalk rises to the Height of ten or twelve Inches, sometimes more, and the Flowers are large and handsome, of the Shape of those of the great Daisy or Oxeye, and purplish underneath. The Root is not violently burning to the Taste, when first taken into the Mouth while fresh, but after it has been held some time there, it proves as hot and acrid as the dried *Pyrethrum* of the Shops.

The *Eastern* Nations use a great deal of this Root themselves; they preserve it while fresh as the *Indians* do Ginger; and it is sent in this State to *Cairo*, *Constantinople*, and many other Places, where it is esteemed an excellent Medicine in Cholics, and in Diseases of the Breast.

The other Kind of *Pyrethrum* is smaller, slenderer in Proportion to its Length, and of a paler Colour. It is usually more wrinkled on the Surface than the former, and is much less acrid and pungent to the Taste. It is sometimes brought over mixed among the other, sometimes singly under the same Name, *Pyrethrum*; but it may be always distinguished by its Smallness and the Paleness of its Colour.

It is the Root of another Plant of the same Class distinguished by *Tournefort* by the Name of *Leucanthemum Canariense foliis Chrysanthemi Pyrethri Sapore*, and by *Linnaeus* under that of *Chrysanthemum fruticosum foliis linearibus dentato trifidis*. The Root of this Plant while in the Earth is thinner and whiter than that of the other, but the Plant itself is much larger; its Stalks are thick and firm, and grow to two, three, or more Feet in Length. The Leaves somewhat resemble those of Camomile, but that they are thicker, less finely divided, and more blunt at the Ends of the Segments. There arise from the Ends of these certain long and slender naked Stalks, on the Tops of which stand Flowers resembling those of Camomile, being white with a yellow Umbo in the middle. The Root of this Plant has all the Virtues of *Pyrethrum*, only in a less Degree.

Pyrethrum of either of these two Kinds is violently acrid and pungent; taken into the Mouth it opens the salival Ducts, and causes them to discharge their Fluid copiously into the Mouth; by which means it does great Service in the Tooth-ach and in some Disorders of the Head. It vellicates the Nerves, and will sometimes assist in opening their Obstructions; and hence is given in sleepy Diseases, in Apoplexies, Lethargies, and in Palsies of the Tongue. To this Purpose it is not given in the common Forms, but ordered to be held in the Mouth and chewed.

Some steep the Roots for four and twenty Hours in strong Vinegar, and then order them to be chewed; others prepare a Sort of Masticatories of powdered *Pyrethrum*, Ginger and Pepper, mixed into a Mass with white Wax, which

which are easily managed in the Mouth. It is sometimes added to Clysters given in apoplectic and lethargic Cases; the Quantity is half a Dram or more of the Root added to the Ingredients of the common Decoction for a Clyster. It has been made an Ingredient in sternutatory Powders, and was long an Ingredient also in the *Philonium Romanum*, but the present Dispensatory omits it.

The third Kind of Pellitory we mentioned in the Beginning of this Chapter, as not of the same Kind with the other two, is the Root of the umbelliferous Plant called *Pyrethrum umbelliferum* by *Matthiolus* and the *Baubines*, *Pyrethrum verum* by many Authors, and *Pyrethrum umbelliferum latiore folio* by *Morrison*.

The Plant is of the Number of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. Ray. There is something in the Text of *Dioscorides*, if truly printed, which seems to make this the true *Pyrethrum* of the Ancients; but the Alteration of a Letter or two, perhaps already altered in the Copies by Accident, makes what he says as well agree with any *Pyrethrum* as with this. The Root of this last Plant is usually about five or six Inches long, and of the Thickness of a Man's Finger; it is wrinkled on the Surface, of a yellowish grey on the outside, and dark coloured within. It is of an acrid Taste, but much less so than the others, and possesses their Virtues only in a more remiss Degree.

CHAPTER XXXI.

B I S T O R T A, *Bistort.*

B I S T O R T is properly of the Number of the tuberous Roots, not penetrating deep into the Earth, but extending itself horizontally in thick Masses under its Surface. We usually meet with it in thick and short Pieces of an irregular Figure, oblong and full of Protuberances, and oddly twisted and contorted, whence its Name *Bistorta*, twice contorted. It is commonly seen in Pieces of an Inch or two, seldom much more in Length, and from a third of an Inch to near an Inch in Diameter. Its Surface is usually wrinkled and furrowed very variously: It is of a considerably firm and solid Texture, moderately heavy, and not easily cut with a Knife. It is of a deep dusky blackish Colour on the Surface, but of a beautiful pale red within, much like that of a half ripe Damask Rose. It powders tolerably easy; it has scarce any Smell, but to the Taste it is austere and very astringent. Bistort Root has naturally a great many Fibres hanging from it, but they are often cut off before it is dried for Use in the Shops. It is to be chosen in large Pieces of a fine Flesh Colour, or pale red within, sound and hard to break, and such as are not dusty or worm-eaten. It is often imported to us from *Germany*, though it is no where produced in greater Abundance than with us.

The Plant which affords it grows in our Meadows in great Quantities; it is of the Number of the *Oetandria Trigynia* of *Linnaeus*, and of the *Herbæ flore imperfecto sive stamineo* of Mr. Ray. It is described by all the botanical Writers under the Name of *Bistorta major*, and *Bistorta radice minus intorta*; for there is a smaller Kind, the Root of which is much more contorted than that of this Species. It is a very beautiful Plant; its Leaves are of a fine shining green, an Inch and half long, and near an Inch broad. The Stalk rises twelve
or

or fifteen Inches high, and bears at the Top a Cluster of elegant pale red Flowers like those of the *Perficarias* or *Arsmarts*, only much handsomer. The Seed is three cornered. It sometimes produces little Granules or fleshy Bulbs under the Spike of Flowers, and in the *Alæ* of the Leaves; these are of the Nature of the Bulbs of the *Dentaria* and some other Plants, and all take Root, if set in the Earth, and grow up into perfect Plants. They are sometimes collected for medicinal Use and called *Fungi Bistortæ*, but the Root is a much better Medicine.

Bistort Root is astringent and vulnerary; it is given with Success to suppress Diarrhoeas and *Profluvia* of the Menfes. It is said to have great Virtues as an Alexipharmic, and peculiarly to be good against the Bites of Serpents and other venomous Animals; but these Virtues are not so well supported by Experience. It is at present used principally in Decoction, two or three Drams to a Pint, but it is seldom used singly. Tormentil is almost always joined to it, and usually some other of the common Astringents.

C H A P T E R XXXII.

TORMENTILLA.

Tormentil.

TORMENTIL is a Root much resembling Bistort in its Manner of Growth as well as in its Virtues. It is of the Number of the tuberous Roots that run horizontally under the Surface of the Earth. We meet with it in Pieces of a tuberous Form, and of a very irregular Figure. They are usually from half an Inch to two Inches in Length, and nearly as much in Breadth and Thickness. They are of a rough and rugged Surface, full of large Knobs and Protuberances, and deeply furrowed between them. The most frequent Pieces are of the Size of a small Walnut, usually somewhat oblong and flatish, and full of Protuberances of several Sizes on every Part. The Fibres which supply the Root with Nourishment arise from the smaller of these; but they are usually cut off before the Root is dried for Use. It is of a moderately firm and hard Texture, considerably heavy, not easily cut with a Knife, and leaves a glossy Surface. It is of a brownish Colour with an Admixture of reddish in it on the Surface, and of a whitish red within. It powders easily, and has very little Smell, but is of an austere astringent Taste.

Tormentil is to be chosen in large Roots, very firm and hard to break, and such as are not too much wrinkled on the Surface, for that is a Sign of their having been taken up at a wrong Season, and having shrunk much in drying; in which Case they have less Virtue. We have a great deal of the Tormentil used in *England* from the *Alps* and *Pyrenean* Mountains, though it is not necessary to send so far for it, as it is produced in vast Plenty in our own Kingdom.

The Plant which affords it is one of the *Icosandria Polygynia* of *Linnaeus*, and one of the *Herbæ Semine nudo Polyspermæ* of Mr Ray. It is described by all the botanical Writers under the Name of *Tormentilla* and *Heptaphyllum*, from its having seven Leaves growing at each Joint; whereas the Cinquefoils which are nearly allied to it, have only five. It is a small Plant, its Stalks are so weak.

weak that they trail upon the Ground, and they are not more than six or eight Inches long ; its Leaves are oblong, narrow, and notched at the Edges, and its Flowers extremely beautiful. They are about as broad as a Silver Groat, and are of a very beautiful bright yellow. They are succeeded by Clusters of Seeds standing on the same Pedicle without any Capsule to cover or keep them together.

It is an excellent Astringent ; it is generally given with Bistort, but is always understood to be the more powerful Medicine of the two. It is given in *Profluvia* of the Menfes and Diarrhœas. It has also the Credit of being a very great Alexipharmic and Sudorific, and is very successfully given in all Cases where an Astringent is necessary, in Fevers, the Small Pox, and the like. It is usually prescribed in Decoction, but it succeeds much better in Powder ; its Dose is from eight Grains to a Scruple. It is an Ingredient in many Compositions intended as Alexipharmics and Astringents.

C H A P T E R XXXIII.

PENTAPHYLLUM, *Cinquefoil.*

WHAT is called *Pentaphyllum* and *Radix Pentaphylli* in the Shops, is not the entire Root, but the cortical Part only, separated from its woody Part within. We meet with it in long and slender Pieces rolled up in the Manner of Cinnamon or the other Barks, that have been dried for medicinal Purposes, in Pieces from two or three to six Inches in Length, and of the Thickness of a Man's Finger at the largest, and about that of a Goose Quill at the least. These are somewhat corrugated on the Surface, of a compact Texture, hard to be cut, and not easily broken ; they are moderately heavy, and of a dusky brown, with some Cast of Reddishness in it on the outside, and of the very same Colour only a little paler within. They are of a somewhat aromatic Smell, and of an austere and astringent Taste.

Pentaphyllum Root should be chosen in moderate Pieces ; the largest have usually less Virtue than these, if they are found and have not been too long kept, they are always fit for Use. They are hardly liable to any intentional Adulteration, because they are so cheap and common. But we have found them in some of the old Shops in *London* accidentally mixed with another Root or Bark of a Root somewhat resembling the smaller Pieces of them in Colour, but very different in Qualities ; this is the *Esula* or small Spurge Root. Those are easily distinguished however from the true *Pentaphyllum* Roots as they are of a redder Colour, thinner, and of a very acrimonious Taste.

The *Pentaphyllum* is a Root of long standing in the *Materia Medica* ; we sometimes receive it from abroad ; but the People who send it to us might send hither for it ; for the Plant which affords it is no where more abundant. It is of the Number of the *Icosandria Polygynia* of *Linnaeus*, and of the *Herba Semine nudo polyspermæ* of Mr. Ray. Its Stalks are so weak that they never stand erect, but crawl along the Ground, and take Root at the Knots and Joints. The Leaves are about an Inch long, and a third of an Inch broad, and are deeply serrated at the Edges. The Flowers are very beautiful, as broad as a Sixpence, and of a fine yellow ; the Seeds stand naked in little Clusters, several after every Flower.

It

It is reputed a very noble Alexipharmic and Sudorific, and as such is made an Ingredient in many of the capital Compositions of the Shops: What we are however more certain of in regard to it is, that it is a good Astringent: It is found to be good in Diarrhœas and Hæmorrhages of all Kinds. It is given in Powder from ten Grains to a Scruple, but more frequently in Infusion, a Dram or two among other Ingredients to the Pint. When any particular Dependence is to be had on it however, it is best to give it in Powder. It makes a good Addition to the common white Drink, two or three Drams of it being boiled in a Quart.

C H A P T E R XXXIV.

CONTRAYERVA.

CONTRAYERVA is an irregularly shaped Root, knotty and full of Irregularities on the Surface: It is never met with very large, an Inch or Inch and half are its usual Length. It very rarely much exceeds two Inches, and in Thickness is usually about half an Inch; often less, but seldom more than that. It is seldom perfectly strait, often very much contorted, and always rises more or less into *Tubera* or Knobs in several Parts, in the whole making up the greater Part of the Root. From these *Tubera*, and from the other Parts of the Root also, there hang over a vast Number of Threads or Fibres, some of them large and thick, the greater Part small; these are extremely firm and tough, and of a whitish Colour; and when the Plant is old, there are frequently small *Tubera* or the Beginnings of new Roots found hanging to these in great Numbers. The Root is of a very dense and firm Texture, considerably hard, very difficultly cut through with a Knife, but not very heavy. It is externally of a faint reddish Colour with an Admixture of brown; sometimes even when very good it is blackish in this Part, but that seems only owing to the Soil it has grown in, the Root being as found, firm, and good within as any. Its Surface is usually wrinkled, though less than that of many other Roots, and toward the Top or Head it is generally of a squamous Texture, or made up of a Number of parallel Coats or Flakes. When broken it is of a whitish Colour with a faint reddish Cast; it powders difficultly, and in the Operation shews its peculiar Texture, beating not regularly into smaller Pieces as the Work proceeds, but separating into long, soft, and woolly Threads, which it is very difficult to reduce to a Fineness fit to pass the Sieve. It has an agreeable, pungent, and somewhat aromatic Smell, and in Taste is acrid, with a little Astringency, and some Bitterness.

Contrayerva is to be chosen in large and fair Roots, firm, sound, and of a good Colour, full of Tuberosities or Knobs, not easily broken, and of a pungent acrid Taste: Before it is powdered for Use the Fibres should be separated, and only the tuberos Part of the Root used, the Fibres being greatly inferior in Virtue.

In *England*, we are not liable to the having this Root sophisticated or adulterated with any thing; but in *Germany* and *France* they often meet with the Roots of the *Asclepias* among it, which having been called by some fanciful People

white Contrayerva, has got as readily into the Adulteration of the true Root of that Name, as the white *Ipecacuanha* into that of the genuine Root of that Name, though neither of them have any Resemblance either in Shape or Virtue to the true.

The Antients knew nothing of this Root, it is but of very late that it has been introduced into the *Materia Medica*. Sir *Francis Drake* seems to have been the first Man who brought it into *Europe*, and from him it was originally call'd *Drakena Radix*. The Name Contrayerva was given it by the *Spaniards*, and as it expresses only a counter Poison, it has not been restrained, only to the Root we have been here describing under it, and which is the only one now kept under that Title in the Shops, but has been given to a great number of others supposed to possess the same Virtues. The Root we have here described is brought from *New Spain*, and indeed is according to some not so properly one as two Roots, which are so like one another in Shape, Taste, and Virtue, that they are gather'd and used indifferently for one another: They are, according to these Authors, the Roots of the two Species of *Dorstenia* of *Plumier*, the Plant is of the number of the *Tetrandria Monogynia* according to the *Linnean System*, and the *Herbæ semine nudo Polyspermæ* of Mr. *Ray*. The one Species is the *Dorstenia dentariæ Radice, Sphandylii folio placenta ovali*, and the other the *Dorstenia dentariæ Radice folio minus laciniato placenta quadrangulâri et undulata*, both described accurately by *Plumier*. The Plants are both low and small, consisting only of Leaves rising singly from the Root, and among them of single naked Stalks, bearing each one Placenta. Dr. *Houston* gather'd the first of these on the Mountains near old *Vera Cruz*, and the other about *Campechy*; he makes them absolutely different Species, but there want farther Observations to determine, whether that be really the Case, or whether the Difference of the Leaves being more or less divided, may not be merely accidental, and even that of the Placenta, owing only to its different Maturity: It may be oval while unfolded or not perfectly ripe, and square afterwards: *Linneus* is of this Opinion, and the perfect Sameness of the Roots of both, in all Respects, seems very much to countenance it.

The Contrayerva Root is an excellent Sudorific, it strengthens the Stomach, dispels Flatulencies, and helps Digestion. It is in great Use in Fevers of many Kinds, and is even by some recommended against the Plague, as one of the greatest known Remedies. It has the Credit among many, of being the greatest Antidote in the World against Poisons of all Kinds, and thence it obtained its Name Contrayerva, which was meant to express Counter-Poison. It is given in Powder and Decoction, but with us principally in Form of the *Lapis Contrayerva*; compos'd of Crabs Claws prepar'd one Pound, prepar'd Pearls and red Coral of each three Ounces, Powder of Contrayerva five Ounces; this used to be wetted into a Paste and made up into Balls, whence its Name *Lapis Contrayerva*; but the New Dispensatory orders it to be kept in Powder, under the Name of *Pulvis Contrayervæ Compositus*. Its Dose is from ten Grains to half a Dram.

CHAPTER XXXV.

SERPENTARIA VIRGINIANA,
Virginian Snakeroot.

THIS is a Root of a very singular Figure, not long and thick, or tuberos and roundish, as most of the other Roots of the Shops, but wholly made up, as it were, of Fibres, or is composed of a multitude of long and thin Filaments, arrang'd in Clusters together: They are about the Thickness of a small Pack-Thread each, and are of a smooth Surface, a tolerably tough and firm Texture, very light, and easily cut or powder'd; they are of a dusky brownish Colour on the outside, and when fresh and good have a yellowish Cast within; they are of a very remarkable Smell, something approaching to that of Zedoary, and are of a bitterish and sub-acrid Taste.

Snakeroot is to be chosen in large Fibres, clean, of a brown Colour, tough, and free from Dirt, or any other Filth that may have been entangled among them; they are apt to decay in keeping, but this is known by their becoming brittle and dusty, and losing their Smell, such are to be wholly rejected. Snakeroot is frequently met with sophisticated, or adulterated with the Roots of the Plant call'd *Virginian Asarum* or black Snakeroot, but this is easily discovered, the Roots of that Plant being black: These are the Roots of the *Asarum Virginianum Pistlochiae folio subrotundo Cyclaminis more maculato* of *Plukenet*. This Plant is a true Species of *Asarabacca*, and its Roots, though they somewhat resemble those of the *Virginian Snakeroot* in Taste and Smell, are by no means to be confounded with it, or used in its Place. This is the only Adulteration of any Consequence, in Regard to this Drug. We often see it differ indeed a little in Appearance between one Parcel and another, but this is not material: We know that there are the Roots of two or three Species of the same Genus of Plants, sent to us indiscriminately under this Name, but as they all possess the same Virtues, the thing is of no Consequence.

The Ancients were wholly unacquainted with our Snakeroot, but it has now been a long Time in Use among us, and keeps up its Credit as a very valuable Medicine. We have it from many Parts of *America*; it is no where indeed more plentiful than in the Country from which it takes its Name *Virginia*; but it is also found in sufficient abundance in *Maryland*, *Pensylvania*, *New Jersey*, and *Carolina*, and in general, that which is brought from the more Southern Provinces, is best.

The Plant which produces the true *Virginian Snakeroot*, or the peculiar Species of it, first known and used in *Europe*, is the *Aristolochia polyrhizos auriculatis foliis Virginiana* of *Morison*, *Histor.* 3. 510. but beside this, the Roots of two other Species, the *Aristolochia violae fruticosae foliis Virginiana*, and those of the *Aristolochia Pistlochiae seu Serpentaria Virginiana Caule nodofo* are taken up as the same and sent into all Parts of *Europe* indiscriminately, under the Name of *Serpentaria Virginiana*. All these Plants are of the same Class, they are of the number of the *Gynandria Hexandria* of *Linnaeus*, and of the

Herbæ flore monopetalæ vasculifera of Mr. Ray. The Roots of the first may be distinguished from the rest, by their being thicker, and of a darker brown than either of the others; those of the second being paler, with somewhat of a greyish Cast intermix'd; and those of the last paler, with some faint Cast of yellowish, but the Distinction is of no Consequence, since the one is as good and as fit for all Purposes as the other.

Virginian Snakeroot, distill'd in a Sand-heat by a Retort, affords an acid Spirit in very considerable Quantity; and after this a thin essential Oil, and then a thick one, having much of the Smell of Camphire. The Remainder in the Retort is a black Cinder, which contains a moderate Portion of a fix'd alkaline Salt. A very good Extract of the gummous Kind may be made from this Root with Water, and it affords a strong Tincture with Spirit of Wine, from which a resinous Extract may be procur'd, but it is found always to contain a large Portion of Salt in it, so as by no means to deserve the Name of a pure Resin.

This Root was first brought into Use as a Remedy against venomous Bites, it being affirm'd to us, that the Bite of the Rattle-Snake was to be cured by it; however much Truth there may be in that, there is no Doubt but that it is a very noble Medicine. It is Diuretic, Diaphoretic, and Alexipharmic: It is even recommended as a Cure for the Bite of a mad Dog, but it is not well to trust to so uncertain Remedies in such terrible Cases. It is certainly good in Fevers, in hysterical Complaints, and against Worms; it is given in Powder or Tincture; its Dose is from four to ten, or fifteen Grains; it is also sometimes made an Ingredient in Decoctions, a Dram or two to the Pint. It is not an Ingredient in any of the officinal Compositions; but our late Dispensatory orders a Tincture of it to be kept in the Shops, made by digesting three Ounces of the Root in a Quart of Proof Spirit, and after three Days standing without Heat, the Tincture is to be filter'd off for Use.

C H A P T E R XXXVI.

C H I N A, *China Root.*

TH E R E are two Kinds of China Root used in the Shops, which are distinguished according to the Parts of the World from whence they are brought, into the Oriental and Occidental: Their Virtues are the same, only that they are stronger in the Oriental Kind; and they are the Roots of two Species of the same Genus of Plants.

The Oriental China Root is of an irregular and uneven Shape, it is brought over to us in large Pieces, some of them a Foot long and three Inches thick, but the more usual Size is four or five Inches in Length, and a little more than an Inch in Thickness: They are not of the Shape of the ordinary long Roots of Plants, but often of an equal Thickness at either End, and full of large Protuberances in several Parts, and are jointed and knotted as it were at small Distances in the manner of many of our Roots, which creep under the Surface of the Earth instead of penetrating perpendicularly into it, and send up new Shoots from different Parts. We seldom see the Root with its natural Surface,
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when we do it is considerably wrinkled, and rises into little Knobs in many Parts between the larger Tubera, but it is usually par'd off in Part before we receive it; enough of it however always remains to shew, that the Root in its natural State is of a brownish Colour, with some Cast of Reddishness in it on the Surface: When cut it appears to be of a fine pale Colour, a white with a faint Admixture of red within. It is of a very firm Texture, hard and almost woody, and moderately heavy; it does not cut very easily with a Knife, and when cut has not that glossy Surface that many other of the harder Roots have. It powders with Difficulty, but at length becomes a fine light and almost insipid farinaceous Substance: It has no Smell, and at the best but very little Taste.

It is to be chosen fresh, hard, and firm, of a faint red Colour wherever it is cut, and free from Worms and Rottenness, to both which Accidents it is very subject, and such, as though it have no very remarkable Taste, yet on chewing fills the Mouth with a soft unctuous Moisture: This is the true Character of its Goodness, when it has been long kept it loses this, and with it all its Virtues.

The Occidental China, call'd by Authors *Pseudo China* and *China Spuria*, is a Root extremely resembling the Oriental one of the same Name; it is somewhat less hard or woody, and is of a darker Colour, often blackish on the outside, and has a greater Admixture of red within: It is in general larger and thicker than the Oriental China, and more full of Tuberosities, in other Respects it is the same: Many have supposed the Size of the China Root a sufficient Character to distinguish whether it came from the *East* or *West-Indies*, and have determin'd all to be Occidental that is more than two Inches thick, but this is erroneous.

I have seen Pieces of Oriental China Root as large as the largest Occidental Roots, and the true Distinction is in the less Hardness, and greater Redness in Colour in the Occidental Kind than in the other; in Smell and Taste it is equally insipid.

The Occidental China is subject to no Adulteration, Care is only to be taken that it is sound; the Oriental is sometimes adulterated with a Mixture of this; it is easily discover'd in this Case only by the Colour, but the Fraud is of little Consequence, one of them having much the same Virtues with the other.

The Oriental and Occidental China are both the Roots of a Genus of Plants of the number of the *Diæcia Hexandria* of *Linnaeus*, and of the *Herbæ bacciferae* of Mr. Ray. The Species that produces the Oriental China is the *Smilax minus spinosa fructu rubicundo radice virtuosa China dicta* of *Kæmpfer*, and the Occidental is the Root of the *Smilax aspera fructu nigro radice nodosa magna farinacea China dicta* of Sir *Hans Sloane*. They are both creeping Plants with prickly Stalks, and cordated and sharp pointed Leaves; and have Flowers growing in Clusters like those of our Ivy, ten, twelve, or more together. The Species of *Smilax* that produces the Oriental China, differs so little from that which produces the Occidental, that many have supposed them to be the same Plant, only growing in a different Soil and Climate; but the Specimens I have received of them from the several Places, shew evidently enough, that they are truly distinct Species.

The Oriental China is brought to us from the *East-Indies*, where it is produced

duced in vast Plenty in many Places. The Occidental is brought from *Peru* and the *Brafsils*, where it is not less abundant than the other in the Eastern Parts of the World. *China* Root was wholly unknown to the Antients, the first Knowledge of it in *Europe* was brought by some *Chinese* Merchants, in the Year 1535, who had seen it used in that Country, and came over full of its Praises for the curing of the Pox, and a Number of other terrible Diseases. It was immediately brought into Use, but unsuccessfully at first, afterwards under proper Management it is said to have done great Cures, but since that time mercurial Medicines have been brought into Use in those Cases, and every thing else has been neglected; perhaps the *China* Root never deserved all the Encouragements that were bestow'd upon it, but it seems however to deserve something more than the present Neglect of it bespeaks. There is no Question of its being a Sudorific and an Attenuant, and therefore calculated to do great Service by a continued Use in many chronic Cases. It is best given in Decoction, and is usually combined with *Sarsaparilla* and *Guaiacum*, an Ounce of it sliced thin is the usual Proportion to a Quart.

C H A P T E R XXXVII.

SARSAPARILLA,
Sarsaparilla Root.

SARSAPARILLA, when perfect and entire, is a Root consisting of a tuberous Head, an Inch or two in Length, and more than an Inch in Thickness, from which there hang down a great Number of thick and extremely long Fibres. The Head or Button is of a spongy Substance, and is cover'd externally with a Multitude of Scales or Flakes of a dry friable brown Matter. This is the Description of the Root when compleat, but it very seldom comes into the Shops in this Form, the Head or tuberous Part is cut off and rejected, and what is brought to us is no more than the Fibres which our Druggists also usually split before they sell them to the Apothecaries.

The Fibres of this Root, which are what we understand in the Shops under the Name of *Sarsaparilla*, are of a very great Length, two, three, or four Feet is common with them, but sometimes they are greatly more; they are however seldom thicker than a Crow's Quill, or a large Packthread, very few of them arriving at the Diameter of a small Goose Quill. They are of a wrinkled Surface, the Furrows all running longitudinally, and being pretty large for the Size of the Root. They are of a firm Texture, and so tough that they may be tied in Knots without breaking; they are externally of a greyish dusky Colour, with some faint Admixture of Reddishness in it, and white within. They are indeed composed of three quite different Substances, a thin cortical one, which is the grey external Part, under this lies a white spongy Matter, which is that the medicinal Virtue resides in, and within that in the Center of the Root is a tough and hard woody Fibre, white and very difficult to be broken, to which alone the Root owes its Toughness, the other Parts being very friable and even mouldering into a farinaceous Substance on being rubbed between the Fingers. The whole Root is very light, it cuts easily either with a Knife or Scissars, and easily is reduced into a fine white farinaceous Powder in the Mortar.

tar. It has no Smell, and at first taking into the Mouth it seems to have no Taste, but after it has been chew'd a little, it discovers a glutinous or unctuous Quality, like that of the *China* Root, and a somewhat bitterish but not disagreeable Taste.

Sarsaparilla is to be chosen in fair and plump Roots, as little wrinkled as may be, and of a pale Colour on the Surface, and when broken having a large Portion of the medullary or fungous Matter between the Bark and the Rib or Nerve in the Center, and such as splits easily its whole Length, and emits no Dust in the pulling it asunder; such as does this is beginning to decay, and when more decay'd it will break in the dividing. *Sarsaparilla* is not liable to any Adulteration among our Druggists, but there are several Roots of different Species of the Plant which produces it gather'd for it; these in general possess all the same Virtues with one another, but the greenish-red bark'd Kind is the true original and genuine *Sarsaparilla*, and is to be preferr'd, and in general those Roots which are too dusky colour'd and too thick are to be rejected; but beside these, which are the Roots of Plants of the same Kind, with that which produces the true *Sarsaparilla*, there are others sent over from some Parts of *America* under its Name, which belong to Plants of a very different Species, and therefore are not to be supposed to possess the same Virtues. We very frequently meet with the Roots of the *Aralia Canadensis caule nudo* of *Boerhaave* and *Linnaeus*, which is call'd *Sarsaparilla* by the People of *Virginia*, under the Name of the true *Sarsaparilla*, but these are easily distinguish'd by their darker Colour and firmer Texture, and by their want of that Viscosity in the Mouth, which the true *Sarsaparilla* has. An Attention to the Characters of the genuine Root will however be sufficient to enable any one to discover all the Counterfeits which do not belong to the same Genus of Plants with great Ease, as to those which do, it is of less Consequence to be nice about them.

The antient *Greeks* were wholly ignorant of this Drug, nor indeed had the *Arabians* any Knowledge of it. It was first brought into *Europe* from *Peru* by the *Spaniards*.

The Plant which produces it is of the Number of the *Diæcia Hexandria* of *Linnaeus*, and of the *Herbæ Bacciferae* of Mr. Ray. And is described by the late Botanists under the Name of *Smilax aspera peruviana*, and by *Hernandez* under that of *Mecapatli sive Zarcaparilla*. *Piso* and *Marcgrave* have a Plant under the Name of *Ivapecanga*, which produces a Root so like the other in Figure and Qualities, that it is indiscriminately sent over to us under the same Name, and there are two or three other Species of the *Smilax*, whose Roots are also of the same Kind and are collected for Use, and sent to *Europe* mix'd one with another, but the Roots of the *Mecapatli* are those alone which perfectly answer to all the Characters of the true original and genuine *Sarsaparilla*.

Four Pound and a half of *Sarsaparilla*, well dry'd and distill'd by the Retort, afford two Ounces of an insipid Phlegm, after this come over about eight Ounces of a subacid Phlegm, then fifteen Ounces of an acid Spirit, after this thirteen Ounces of a Spirit abounding both with an acid and urinous Salt, and finally six Ounces of a heavy essential Oil that sinks in Water. The remaining Matter, calcined and lixiviated, yields a little more than an Ounce and two Drams of a fix'd Salt approaching to the Nature of Sea Salt. Its Effects on
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the Body are therefore owing to an essential acid Salt, mix'd with a thick Oil and Earth.

It is a Sudorific and Attenuant, it has been esteem'd a great Medicine in the Cure of the Venereal Disease, but the Use of Mercury has of late made every thing else in this Intention be neglected. It is still however found to do great things in many chronic Cases, where Obstructions of the Viscera are at the Bottom, and Attenuants are proper, in these Cases however it is to be continued a long time and is best given in Decoction, or by way of Diet-drink. It is generally supposed of the same Nature with *China*, but it certainly is a much more powerful Medicine.

C H A P T E R XXXVIII.

IRIS, *Iris Root.*

IT has been generally understood that there are two officinal Roots of this Name, the one of which has been distinguish'd by the Name of the *Florentine Iris*, the other by that of *Iris nostras*, or our common Flower de Luce. It will be more proper however to say, that we use the *Iris Root* as we do the *Angelica*, sometimes dry, sometimes in its fresh State, and that we take up the fresh Root from our own Gardens, but import the dry from abroad. The Case is exactly the same indeed in regard to this Plant, as to the *Angelica*, the Species is the same in the warmer Countries as here, but the Roots of our *Iris* will never have that Fragrancy if dry'd, which those of warmer Climates have, any more than those of our *Angelica* will.

The dry or *Florentine Iris*, or as it is vulgarly spoken, *Orrice*, is a moderately large Root of an oblong irregular Figure, crooked, bent, and full of Protuberances and Knots; its Figure shews it to be one of those that naturally spread just under the Surface of the Earth, not of those that descend perpendicularly into it. We meet with it usually in Pieces of four or five Inches long, and from half an Inch to an Inch in Thickness. It is of a tough, firm, and almost woody Texture, not easily broken, nor cutting freely with the Knife. It is moderately heavy, and is of white Colour throughout, tho' somewhat less purely so on the Surface than within. We are not to suppose this however to be the natural State of the Root, it is always stripp'd of its Bark or Rind while fresh, and only the internal or medullary Part falls in our way. Its general Shape is not round as in most other Roots but flatted, and its Protuberances are of no regular Figure. It is of an extremely fragrant and perfum'd Smell, somewhat approaching to that of the Violet, and of an acrid and somewhat bitterish Taste.

It is to be chosen sound, firm, and of a good Smell, such as is tough and damp, and therefore will not break, or as is dusty when broken, is to be rejected; the Fragrancy of Smell is lost in both these Cases.

The *Iris Root* has been known as a Medicine from the earliest Times we have any Knowledge of; *Dioscorides* has a large Account of it under the Name of *Iris Illyrica*, and the *Arabian Authors* all describe it under the Names of *Al-*

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meni inni and *Aiersa*. We have it principally from *Florence*, but there is also a great deal very fragrant imported from some Parts of *France*.

The Plant which produces it is of the Number of the *Triandria Monogynia* of *Linnaeus*, and of the *Herbæ bulbosæ affines* of Mr. *Ray*. It is described by all the botanical Writers under the Name of the *Iris vulgaris*, and is known among us by that of the common Flower de Luce: in *Italy* and other warm Countries, and particularly in those Parts of *Florence* where the Roots are collected for Use. This Plant has white Flowers instead of blue as with us, and the Leaves are of a bluer green: we know that Multitudes of Plants even in our own Country, as they grow in a richer or more barren Soil, or as they are more or less exposed to the Sun, will have sometimes blue, sometimes white Flowers; and as there appears no essential Difference of any Kind, between the *Iris* of *Florence* and that of our own Gardens, there is all the Reason in the World to declare them the same Plant, growing in different Soils, not two different Species. When medical Writers of this Part of the World mention the Juice of *Iris*, they always mean the Juice of the Roots of our own Flower de Luce, when they speak of the Powder of *Iris*, they mean of the *Florentine* Kind.

The *Florentine* or dry *Iris* Root is an Attenuant and Expectorant, it excellently thins the tough Phlegm adhering to the Bronchia, and renders it easily discharged. It is given with Success in Asthmas, Difficulties of Breathing, and many other Disorders of the Breast and Lungs. The Dose is from ten to fifteen Grains in Powder, but it is not so often given alone as might be wish'd, tho' it is an almost constant Ingredient in Compositions with these Intentions.

It is sometimes given with Success to Infants troubled with griping Pains in the Bowels, and is a good Ingredient in sternutatory Powders; and *Hoffman* tells us, that to People of cold moist Habits it frequently proves a Hypnotic.

The Juice of the fresh Root of our *Iris*, or common Flower de Luce, is an excellent Medicine in Dropsies, but it is difficultly managed, and is apt to operate too violently; the best way of giving it is with white Wine, an Ounce or two for a Dose. It works both by Vomit and Stool, and discharges a very great Quantity of Phlegm. It is also order'd by many to be snuff'd up the Nose by way of an Errhine or Sternutatory, and it operates very violently this way, bringing forth a great Quantity of Water, and sometimes easing Complaints in the Head in a very remarkable Manner. For the Cure of a Dropsy the Juice is to be taken every two or three Days in such Doses as the Strength of the Patient will bear: many have been recover'd from desperate Cases by it.

CHAPTER XXXIX.

ENULA CAMPANA,
Elecampane.

THE *Radix Enule* is a very large and thick Root. It is one of the long Kind, and is not unfrequently a Foot and a half or more in Length, and of the Thickness of a Child's Wrist. Its Surface is smooth and even, and it sends out Fibres from several Parts before it divides at the Bottom, as it often does.

does into several little Branches. It is of a considerably firm and close Texture, moderately heavy and very tough.

Its Colour on the Surface is a dusky brown with a Cast of reddish in it; within it is white; it has little Smell while fresh, but when dried it becomes fragrant and agreeable. Its Taste is somewhat acrid and aromatic, and much more so when dry, than while green. It is in its dry State that we usually meet with it in the Shops, and that not whole but cut into Slices, either transversely, or what is more frequent, into short longitudinal ones; the Root having been first cut transversely into Segments of two or three Inches long, and these afterwards slit as it were into Pieces of the Thickness of a half Crown, and hung on Strings to dry. These dried Pieces are of a whitish or pale brownish Colour, and have a brown Edge often at each Extremity where the Bark appears: They are very hard and difficultly reduced to Powder except in Mills, but the Powder they afford is of a fine white, and of a very aromatic and agreeable Smell.

The fresh Roots of Elecampane which are preferred for some Purposes, are to be chosen large, sound, and full of Juice; the dry ones are to be very firm, well scented, and not mouldy, which is an Accident they are very liable to from bad keeping. Apothecaries are apt to buy the Powder of the Druggists, but this is usually adulterated with common Wheat Flower; so that where any dependance is had on it as a Medicine, it is highly necessary the Powder is prepared on Purpose.

The Plant which affords us this valuable Root, is one of the *Syngenesia polygamia superflua* of *Linnaeus*, and one of the *Herbæ flore composita semine paposo* of *Ray*. It is described by all the botanical Writers under the Name of *Enula*, *Hellenium*, *Inula*, and *Elenion*. *Tournefort* calls it *Aster omnium maximus* *Hellenium dictus*. It is a Native of *England*, but is not very common with us; in *Germany* it is very frequent. We cultivate it in the Physic Gardens about *London*, from whence the Markets are furnished with the fresh Roots; but the dried Roots are in general imported from *Germany*. The Leaves that rise immediately from the Root of the *Enula* are two Feet or more in Length, considerably broad, soft to the Touch, and pointed at the End. The Stalk grows to four, five, or more Feet in Height, it is strait, thick, and hairy, and towards the Top divides into many Branches; it is full of Leaves of the Shape of those from the Root but somewhat smaller; and every Branch of it has at its Top three or four large Flowers somewhat resembling the Sun Flower, but composed of narrower *Radii*. It flowers in *June*, and the Root is taken up for medicinal Use in *September*.

The fresh Root of Elecampane, on several Trials, manifests some slight Acidity: Five Pounds of it, distilled in a Retort, yield first about twenty seven Ounces of a clear and colourless Phlegm, with the Smell and Taste of the Root, and with some Degree of Bitterness; the first Runnings of this are faintly saline and subacid to the Taste; the latter are austere and more acid; after this comes over a limpid Liquor of the same Kind, with some Portion of a thick, concreted and granulated Oil of a greyish Colour; this Liquor grows more austere in the last Runnings, and in the whole amounts to two Pounds two Ounces in Quantity; after this come over about two Ounces and a half of a red-

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distill Liquor of an empyreumatic Smell, and of an acid and austere Taste much more intense than in any of the former Runnings; after this a little more than an equal Quantity of a brown empyreumatic Liquor obscurely acid, but loaded with a large Quantity of a volatile urinous Salt; and after this about nine Drams of an Oil as thick as Syrup. The Remainder in the Retort, calcined and lixiviated, affords about half an Ounce of a fixed Salt of the alkaline Kind.

The fresh Root of Elecampane macerated three or four Days in Water, and distilled in a common Alembic, yields a whitish Water tasting of it very strongly, and a concreted Oil of a greyish Colour, about half a Dram from the Pound. This forms itself into little ramified Masses, and Part of it swims at the Top, Part sinks to the Bottom of the Water. This concreted Oil collected together and melted over a gentle Heat condenses again when cold into a thick resinous Matter resembling Turpentine, of a brown Colour and strongly scented of the Root; after this Oil is in great Part come over, there runs a clear Water still smelling of the Root, but of a faintly acid Taste. The white or turbid Water is to be thrown again into an Alembic, and the first Runnings of it are to be preserved; these though very turbid and white will become limpid in standing, and the same greyish Oil will separate from them, and swim partly at the Top, and partly sink to the Bottom, in the same fine Masses like Flakes of Snow.

This concreted Oil of Elecampane is a singular Product, and somewhat approaches to the Nature of Camphire, and somewhat to that of Flower of *Benjamin*. It is extremely worth a Trial in Medicine. I have observed the same Thing from a like Distillation of the Roots of the *Caryophyllata* or Avens, and one or two other Plants. The concreted Oil of the Avens prepared in this Manner, is one of the most agreeable Smells that I know.

Elecampane Root has been long deservedly famous in Medicine on many Occasions; it is an excellent pectoral Stomachic and Aperient; it promotes Urine and the Menfes; and has beside these Virtues, the Credit of being a very powerful Sudorific and Alexipharmic. It is good in Coughs, Asthmas, and Difficulties of breathing; and even in the first Stages of Consumptions has been known to do great Service. It is generally given in Powder, and made an Ingredient in Electuaries; but the most efficacious Way of using it is in Decoction of the fresh Root.

They preserve it in some Places as Ginger is candied in the *East* and *West Indies*, and prefer it to that Spice on all Occasions: The *Germans* first hit upon this Method of using it; and the preserved or candied Elecampane obtained the Name of *German Spice* from that. It strengthens the Stomach, and assists Digestion. It attenuates and carries off the tough and viscous Foulnesses that are apt to gather about the Coats of the Intestines, and by this Means sometimes proves purgative. It often cures habitual Cholics on this Foundation, and gives Relief in Cases arising from such Foulnesses, for which all other Medicines had been given in vain. Wine in which the Roots of Elecampane have been infused is esteemed a great Preservative against Contagion. Externally Elecampane is esteemed a Cure for the Itch and most other cutaneous Foulnesses. The Decoction also will sometimes cure in the same Cases. A Resin of Elecampane may be prepared

in the same Manner as that of Jalap. It possesses many of the Virtues of the Root, and is a very agreeable Way of giving it. Beside the extemporaneous Use of Elecampane, it is an Ingredient in many of the Compositions of the Shops, and vast Quantities of it are used by Farriers and others for the Diseases of Horses.

CHAPTER XL.

GLYCYRRHIZA,

Liquorice.

THE Roots we have hitherto been describing, and the greater Part of those which are to follow, are only met with dried in the Shops, and used in that State. Liquorice Root on the contrary is always kept fresh and full of Juice there, and is generally intended to be used so in Compositions.

Liquorice Root is of a very singular Figure, and easily distinguished by its Shape alone from all the other Roots of the Shops. It is extremely long and slender. It seldom much exceeds the Thickness of a Man's Thumb at the large End, and thence tapers very gradually so as at the Distance of two Feet, or sometimes three, to be as thick as a Finger. It is of a very smooth and even Surface, and of a remarkably tough Texture. It will bear to be bound round the Hand, or tied in Knots without breaking. It is considerably heavy, and when dry is sufficiently hard; but in the fresh State in which we are to describe it, it is very soft and easily cut through with a Knife. It is externally of a dusky reddish brown, but within of a very fine yellow, full of Juice, void of Smell, but of a very remarkably sweet Taste, even sweeter than Sugar.

It is to be chosen fresh, sound, and full of Juice, with its Coat smooth, and the Ends of the Roots not decaying. It is too cheap and too singular in its Characters, to admit any Possibility of Adulteration. The Name *Glycyrrhiza* has been known in Medicine from the earliest Times we have any Account of; but it is to be observed that the Liquorice or *Glycyrrhiza* of *Dioscorides* and the *Greeks*, which they called also *Scythica Radix*, was not exactly the same with ours, but a larger and thicker Root belonging to another Plant, of the same *Genus* indeed with ours, but of different Species. Authors have described the Plant to which the Root belongs under the Name of *Glycyrrhiza vera Dioscoridis*, and *Glycyrrhiza capite Echinato*. *John Bauhine* has it under the Name of *Glycyrrhiza Dioscoridis Echinata non repens*, and *Tournefort* in his Corollary under that of *Glycyrrhiza Orientalis siliquis hirsutissimis*. Its Root differs from that of our Liquorice, in that it is as long and thick as a Man's Arm, and though of a sweetish Taste, yet much less so than ours. Our Liquorice and this are both Plants that bear Pods, but the Pods of ours are smooth and stand single, each on its own Pedicle; whereas those of this Plant are all clustered together into a Kind of Head and are rough and echinated. The Plant of which our Liquorice is the Root is described by all the botanical Authors under the Name of *Glycyrrhiza vulgaris*. It grows to four or five Feet high; its Stalks are hard and woody; its Leaves are small and roundish; and they stand many together on the two Sides of a Rib, making what Authors call

call a winged Leaf. They are viscus to the Touch ; the Flowers are of the papilionaceous Kind, small and bluish.

The Plant is one of the *Diadelphia Decandria* of *Linneus*, and of the *Herbæ flore papilionaceo seu leguminosæ* of Mr. Ray. Liquorice grows wild in many Parts of France, Italy, Spain and Germany. We have it not wild with us, but we cultivate it in great Abundance in *Yorkshire* and many other Parts of the Kingdom ; and by the good Order we keep the Soil in, produce better Roots, longer, evener and more succulent than are to be had from any other Part of the World. The rest of *Europe* is in great Part furnished by what grows about *Bayonne* and *Saragossa* in *Spain*, whence vast Bales of it are annually sent. It is to be kept fresh either by burying it under Ground, or keeping it in Sand, wetted from Time to Time. Great Care is to be taken that it does not damage with this Management, when one Piece begins to decay, the rest generally all follow.

Liquorice is an excellent Medicine in Coughs, and all Disorders of the Breast and Lungs. It obtunds the Sharpness of acrid and Salt Humours. It is also recommended against Disorders of the Kidneys and Bladder, and is said to take off the Sense of Pain in many terrible Complaints. It is an Ingredient in almost all Decoctions and Ptysans, in which it is esteemed for obtunding Acrimony, and for giving the whole a very pleasant Taste, and drowning the worse Flavour of the other Ingredients. It may be observed however that the dry Root is much fitter for these Purposes, a Decoction of it being of a much more agreeable Taste than that made from the fresh. It is an Ingredient in many Syrups and Electuaries, and other Shop Compositions ; but the only simple Preparation of it in Use is its inspissated Juice, commonly known by the Name of *Spanish Juice* of Liquorice, which will be treated of among the inspissated Juices.

CHAPTER XLI.

RADIX ERYNGII, *Eryngo Root.*

THE *Radix Eryngii* is one of the long Roots ; it grows to fourteen or sixteen Inches in Length, sometimes more, and to the Thickness of one's Finger. Its Surface is somewhat wrinkled, the Lines running longitudinally, and being sometimes only superficial, sometimes very deep. It is moderately heavy and very tough. It is indeed scarce possible to break it transversely, but it easily breaks in a longitudinal Direction. It consists of a soft, tender, and fleshy cortical Part, and an internal one of a hard and woody Nature, which easily separates from it. It is of a dusky brownish Colour on the outside, and white within. Its Smell is very fragrant, and approaches to the Nature of a Perfume. Its Taste is sweetish and agreeable, but it has somewhat acrid in it.

The Plant which affords us this Root is one of the *Pentandria Digynia* of *Linneus*, and one of the *Herbæ Corymbiferae* of Ray. It is common on the Sea-Coasts of our own Island, and of almost every Part of *Europe*, and is described by all the botanical Writers under the Name of *Eryngium*, *Eryngium maritimum*, and

and *Eryngium maritimum*. It grows to about two Feet high, and makes a very singular Appearance; the Stalk is not very thick, but extremely tough; it is striated on the Surface, and hollow within, but the Cavity is fill'd up with a fungous Pith. Its Branches are so numerous, and every way so disposed, that the whole Plant assumes a sort of globular Figure. The Leaves are not very large, broad, and serrated at the Edges, and arm'd there with very sharp Thorns; they are of a blueish green Colour, with a Cast of white, and are very tough and firm, perfectly smooth on the Surface, and of a somewhat aromatic Flavour when chew'd. The Flowers are extremely small, and of a whitish Colour, but they are collected into a sort of globular Heads, which make a pretty Appearance; under these there stand a Series of narrow Leaves, or rather of long Spines, striated and beset with other smaller Spines along their Edges; these make a sort of circular Support to the little Heads, and have a singular and very agreeable Appearance.

A Pound of the fresh Roots of *Eryngium*, distill'd in a Retort, yields first about two Ounces and a half of a clear, colourless, and subacid Phlegm, smelling very strongly of the Root: After this comes over about seven Ounces and a half of a very acid and austere Liquor, colourless at the first Running, but brown toward the End: After this a small Quantity of a reddish Liquor, impregnated with a volatile urinous Salt, and with a small Portion of Acid; and finally, about five Scruples of a thick brownish Oil, of the Consistence of a Syrup. The Remainder in the Retort, calcin'd and lixiviated, yields about two Scruples of a pure alkaline Salt.

The Root of the *Eryngium* is an excellent Attenuant; it incides and dissolves the tough and viscid Humours that are apt to clog the Viscera, and opens their Obstructions; it is hence deservedly acknowledged to be an excellent Hepatic, Uterine, and Nephritic. It promotes Urine, and the Menfes, and is excellent in Jaundices, and in the beginnings of Dropsies. The whole Virtue of the Root, it is to be observed, is in the external or cortical Part, and that is of so tough and fibrous a Texture, that it cannot be reduced to the common Form of Powder without such a previous drying as robs it of the greater Part of it. It is therefore to be given in Decoction, or candy'd, if any great Effect is expected from it.

It is an Ingredient in many of the Shop Compositions, and has the Credit of standing among the number of the five lesser opening Roots, though it deserves a Place among what are call'd the five greater. It is an excellent Medicine in slight Suppressions of the Menfes, when steel Medicines would not be proper; this Root, moderately eaten in the candy'd State, has not the Appearance of a Medicine, yet will have all the good Effects of one; in other Cases where Steel will be at length necessary, this is an excellent Preparatory for it. The candy'd Root is a good thing, with other Medicines, in all chronic Cases; it has also the Credit of being a Provocative to Venery, and many eat it continually under that Opinion.

Externally it is much spoken of as a Preventer of Abortion: The Women in *Italy* frequently use Cataplasms of it with this Intent, apply'd to the Belly below the Navel: And *König* recommends it boil'd in Wine for the same Purpose. The candy'd Roots are also recommended as Preservatives against Contagion.

D R Y ' D R O O T S,

Less frequently used in M E D I C I N E.

C H A P T E R I.

COSTUS ARABICUS,

Arabian Costus.

THE *Arabian Costus* is a Root of the tuberous Kind, though of no very regular Figure: We generally meet with it in Fragments of an oblong Shape; they are from two to five or six Inches in Length, and from half an Inch to more than an Inch in Thickness; they are not strait and even, but variously bent and contorted, and are flattish in some Places, and rising into Protuberances in others; they are of a tolerably smooth Surface, though not without some Wrinkles and Furrows, especially when they have been taken up at an improper Time of the Year, and carelessly dry'd; they are of a lax and spongy Texture, very light, and rather tough than hard, being, though not easily broken, yet readily enough cut through with a Knife; they are of a dusky, whitish, or a greyish Colour on the outside, generally with more or less Admixture of Greyishness in it, and of a whiter Colour within; they are of a very fragrant Smell, and of an acrid Taste, somewhat aromatic and a little bitterish; their Smell more resembles that of the *Florentine Orice* than of any other Root, and their Taste has something of that of the round *Cyperus*, but more strong and lively, and much more agreeable; the best and most fragrant of the Roots when broken appear somewhat resinous.

The *Arabian Costus* is to be chosen sound, firm, yet not heavy, and of a very fragrant Smell; it is very subject to be worm-eaten, in which Case it loses all its Virtues, and will also be quite destroy'd in that Respect, barely by long keeping,

The Name of *Costus* has been known in Medicine ever since the earliest Times we have Account of, but there is great Confusion among Authors, about what the Antients meant by it, nor is it easy to determine, whether this Root was known to them or not. It is however the only Kind now used in the Shops, and is brought from the *Levant*. It is also found in many Parts of *China*, and the *East-Indies*, and also in *America*.

The Plant which produces it is one of the *Monandria Monogynia* of *Linnaeus*, and is described by the Name of *Tsiana Kua* in the *Hortus Malabaricus*, and under that of *Paco Catinga* by *Marcgrave*: *Linnaeus* in his *Hortus Cliffortianus* calls it simply *Costus*. Its Root, while fresh, is plump and full of watery Juice; the Stalks grow to three or four Feet high, and are round, jointed like those of Reeds, and of a red Colour; the Leaves are oblong and narrow, and pointed at the Ends; the Flowers stand in squamous Heads, and are small; the Seed-Vessels which succeed these are small, but contain in each a number of triangular Seeds, having an aromatic Smell like that of *Ginger*.

The

The *Arabian* Costus here described is an Attenuant, a Diuretic, and a Sudorific; it is given in Obstructions of the Menfes, and in chronic Cases in which there are Infarctions of the Viſcera. Its Doſe is from ten Grains to half a Dram, but we ſeldom hear of its being given ſingly; it is uſed in the Place of the true Costus of the Antients in the Compoſitions, the Preſcriptions for which are handed down from their Times, in the *Venice* Treacle, Mithridate, and Caryocoſtine Eleſtuary. We are very certain that it poſſeſſes much the ſame Virtues with the Costus of the old Authors, whether it be the ſame Root or not with any they have deſcribed. It is to be lamented, that even this *Succedaneum* for the Costus of the *Greeks* is ſcarce among us, and our Druggiſts ſeldom are able to furniſh it, ſo that the Apothecaries are reduced to uſe *Succedaneums* for it; ſome of them the Roots of the Garden Costus, others Zedoary, others Angelica, and others other things.

After this Account of the Costus of our own Times, it may not be improper to enquire a little, what was the Costus of thoſe long before us. *Dioſcorides* mentions three Kinds of it, which he diſtinguiſhes by Names form'd from thoſe of the Countries where they were produced, the *Arabian*, the *Indian*, and the *Syrian*: The *Arabian* he tells us was white, light, of a very fragrant Smell, and acrid to the Taſte, all this agrees very well with our Costus, but it is not enough to aſcertain us, that he meant that Root; the *Indian* he tells us was light, plump, and black, and the *Syrian* heavy, of a yellowiſh Colour, and ſtronger Smell than any. *Galen* talks of the beſt Costus being white, and tells us of its having a ſlight Bitterneſs, and a very great Acrimony, ſo much indeed as to exulcerate the Mouth if held long in it. *Pliny* follows *Dioſcorides*, in mentioning a white, and a black Costus, and he tells us, that the white was the beſt; and adds, that they were the Roots of a ſort of Shrub; this latter Circumſtance, if to be depended upon, makes wholly againſt our Costus being that of the Antients.

The *Arabians* ſuppoſed the Costus in Uſe in their Time, to be the ſame with that of the antient *Greeks*, and divided into three Kinds, as *Dioſcorides* does; all that they ſay indeed of it is tranſcribed from the Account that Author gave of it; except that *Avicenna* adds, of the *Arabian* Costus, that it was of a white Colour, tending either to yellowiſh or to reddiſh, and that the *Indian* was bitter and of a ſtronger Smell than the *Arabian*; and that the *Syrian*, which he calls alſo the *Roman*, was yellowiſh, and of as ſtrong a Smell as any. This ſeems added much at Random, and lets us very little more into the true Hiſtory of their Costus.

The later *Greek* and *Latin* Writers divide Costus into two Kinds, the ſweet and the bitter, but neither the antient *Greeks*, nor the *Arabians* knew any thing of this Diſtinction. Upon the whole it muſt be acknowledged, that our *Costus Arabicus* does not ſeem to be the ſame with either of the Kinds, mentioned either by the *Greeks* or *Arabians*, but an aromatic Root of late Years introduced into the Shops, to ſupply the Place of thoſe, as they became not only ſcarce, but in a manner unknown. We have ſome Druggiſts who talk, in the Language of *Pomet*, of three Kinds of Costus Roots now in Uſe, the ſweet, the bitter, and the *Arabian*, but they deſcribe under the former two Names, Roots which can have no Title at all to that of Costus, and which their own arbitrary Fancies alone can have given its Name to.

C H A P T E R II.

DORONICUM,
Leopards Bane.

THE *Doronicum* of the Shops is a Root of a very singular Figure, and is impossible to be mistaken for any other, or not to be known at Sight by any Body who has but read its Description. It is of an oblong Figure, and moderate Size: We usually meet with it about four or five Inches long, and of the Thickness of a Finger, but it is often met with smaller, the younger Roots having been taken up, and sometimes though rarely larger. It does not seem a single continuous Body, but appears compos'd of a great number of *Tubera* or Knobs, of about the Bigness of half a Nutmeg more or less, arrang'd one over another, and their Commissures or Joinings mark'd with deep Furrows, so that they appear so many Joints: There are often a number of Fibres hanging from these, but sometimes they are taken off before the Root is dry'd for Use. It is of a tolerably firm Texture, not strait, or however very seldom so, but usually twisted somewhat circularly toward the Bottom; which Disposition, together with the Singularity of its jointed Structure, gave fancyful People an Idea of its resembling the Tail of a Scorpion, and thence calling it the *Scorpion Doronicum*. Its Surface, in the several *Tubera*, is tolerably smooth; it is not very heavy, but is considerably firm, and somewhat tough, and is more easily cut than broken. It is of a dusky yellowish Colour on the Surface, and white within; it has scarce any Smell, and is of a very remarkable Taste, being sweetish and styptic, and having a remarkable Viscosity if held any Time in the Mouth.

It is to be chosen in large firm Roots, sound, not friable, and not wrinkled on the Surface, for such as are so have been taken up at a wrong Time of the Year, and have not half their Virtue. This is the Root most generally received, as the true and genuine *Doronicum* of the Shops; but the Authors who have treated on these Subjects, have mentioned no less than three other Roots belonging to Plants of the same Genus, though different in Species, which have been received at Times, under the Name of the true *Doronicum*. These are the Roots of, 1. The *Doronicum minus* of Ray, Gerrard and Parkinson, the *Doronicum Plantaginis folio* of Caspar Baubine. 2. The *Doronicum radice dulci* of Caspar Baubine, *Doronicum folio subrotundo serrato radice repente* of other Authors. 3. The *Arnica* or *Doronicum Germanicum* of Ray, Parkinson, &c. But these have no Claim to the Title of *Doronicum* of the Shops, according to the Descriptions given of that Root, by the first People who have treated of it in our Times.

If we have all this Uncertainty in regard to the *Doronicum* of our own Times, much less Certainty still have we of that of earlier Ages. The *Arabians* were the first who brought the Root into Use, for the modern *Greek* Word *Doronizi*, and the *Latin* *Doronicum*, are both evidently enough derived from the *Arabian* *Duronegi*; but what the *Arabians*, who are to be understood to be the original Authors on this Subject, meant by their *Duronegi*, it must be confess'd their Accounts are so slight and careless, that it is at this Time impossible to know, though it is easy enough to see, that they did not mean our *Doronicum* by it.

They tell us it was a woody Root, hard, heavy, grey without, and yellowish or whitish within, and that it was a high Cordial, and an Antidote against Poisons. It is easy to see that where this is all the Account we have left us of a Root, we have much too little left to make out any thing by.

The Plant which produces the *Doronicum* now met with in the Shops, and described in the Beginning of this Chapter, is one of the *Syngenesia Polygamia superflua* of *Linnaeus*, and one of the *Herbæ flore composito discoide Semine papposo* of Mr. Ray. It is described by *Caspar Bauhine* under the Name of *Doronicum radice Scorpii*, and is called by others *Doronicum latifolium*, and *Doronicum Romanum Officinarum*; though evidently of the same Genus with the other Roots mentioned under the Name of *Doronicum* by the Moderns, the Plant which produces it differs, as well as the Root itself, very considerably from the rest in Figure. The Leaves are large, broad, and covered with a short and soft whitish Down. The Stalk rises to about a Foot high, and bears very beautiful yellow radiated Flowers. The Seeds are small and black, and are winged with Down.

Notwithstanding that this Root has long had a Place in the Catalogues of the *Materia Medica*, it remains yet a Doubt whether it be a Poison or an Alexipharmic: The greater Authorities as well as the greater Number of them are however on the Side of its being an Alexipharmic: and upon the whole, it seems probable, that the Authors who declare it a Poison, mean by the Name *Doronicum* some of the other Roots mentioned above, and not the Species here described and intended by the original Authors as an officinal.

If it be certain however that any of them are poisonous, the Caution of keeping up to the Distinction of the Species, and admitting only this into the Shops ought to be observed with double Strictness. We have indeed Accounts from Authors of Credit, that Dogs have been killed by this Root; but it has been alledged that if this were certain, it is yet no Proof of its being fatal to Men; for that many things which to us are good Medicines, are fatal to Brutes of several Species. We have an Account from *Gesner*, that determined to give a decisive Trial to the Experiment, he took two Drams of the Root himself; he says that he found no Inconvenience for eight Hours after; but at the End of that Time he felt his Stomach swelled and uneasy, and his Limbs grow feeble; that these Symptoms continued on him two Days without any farther Harm, and were at the End of that Time wholly taken off by the Use of a cold Bath. We are not certain that *Gesner* would have died if he had taken a larger Dose of this Root; but it appears evidently, that it was capable of producing bad Effects. Upon the whole, this makes so much against the Credit the best Authorities can give it however, that as we have Medicines enough to answer all the Purposes it is recommended for, and which we know to be safe, we had better banish the Use of so suspected a Drug from Practice.

The German *Doronicum* or *Arnica* hardly comes properly under Consideration here among the Roots, as the Leaves and Flowers of it are principally used. It is to be observed however, that tho' a *Doronicum*, this can never be suspected of any poisonous Quality, since it is in common Use in the German Shops, and never has been known to be attended with any ill Consequences. This is the *Doronicum plantaginis folio* of Authors, the *Alisma* of *Matthioli*, the *Callia Alpina*

Alpina of *Gesner*, and the *Nardus Celtica altera* of *Lobel*. The Leaves of this Plant are like those of the hoary Plantain, and stand in Pairs upon the Stalks. The Flowers are radiated, large, and of a beautiful yellow, and the Seeds small, oblong, and blackish, and each winged with its Flight of Down.

The *Germans* give an Infusion of the Leaves and Flowers in Wine, to People who have received inward Bruises, in order to disperse the grumous and coagulated Blood. There is no Doubt of its being a powerful Attenuant, and it always acts as a Sudorific and Diuretic; sometimes if the Infusion be made very strong, as a Vomit: They are so fond of it on this Occasion, as to call it *Lapforum Panacea*: If they give it in too frequently repeated Doses, it sometimes occasions Pains, Heat of the Flesh, and Difficulty of breathing; and it becomes necessary to bleed to take down the Symptoms; but no Harm was ever certainly known to be done by it, even however carelessly given by the common People to one another.

The Root of this Species of *Doronicum* is of a fragrant Smell, and aromatic, acrid, and bitter to the Taste. It is not dried or kept in their Shops, unless by particular People; but it is said to be a strong Diuretic while fresh, and to promote the Menfes. Perhaps the Root of this Species deserves better to be received as the *Doronicum* of the Shops, than that which evidently is meant as such, by the Authors who first prescribed any Root under that Name.

C H A P T E R III.

ANTHORA.

THE *Anthora* or *Antithora* of the Shops is a thick and short Root: We usually meet with it in Pieces of an Inch or a little more in Length, and about half an Inch or somewhat more than that in Thickness. These are usually found single, but sometimes two or three joined together. It is of an oblong Figure, but not very regularly shaped; it is thick at the Top, or a little lower, and thence tapers more or less to the Extremity; sometimes it is so gradual in this tapering as to become of a conic Figure in the whole; but more usually it is nearly of the same Thickness for the greatest Part of its Length, and only grows small just near the lower End; and sometimes terminates abruptly there in a large Fibre, after making a simple *Tuber* or thick Knob in all the rest of its Form. And not unfrequently it is as thick as long, and resembles a large Root of round *Cyperus* or the Bulb of an *Orchis*; in this roundish Shape it is sometimes as big as a large Walnut. It is somewhat rough and wrinkled on the Surface; its Texture is close and firm, it is considerably heavy and hard, is not easily broken, nor cuts freely with a Knife. It is furnished with many Clusters of Fibres, which are in general very small and slender, and usually much twisted and curled; these however are often taken off before the Root is dried for Use. It is of a dusky brown Colour on the outside, and white within; it has no remarkable Smell, but it is bitter to the Taste, and has a Sort of Astringency with it, and is very acrid. It is to be chosen firm and hard, the least wrinkled that may be on the Surface; and in the largest Roots the great Caution is to see that the Roots are not worm-eaten, dusty, or rotten, which is generally

generally the Case with the Roots we have in Use; what are to be found in the Shops having usually been there a long Time.

The ancient *Greeks* were wholly unacquainted with this Root, but the *Arabs* had a very great Opinion of its Virtues; they called it *Bishna* and *Algildnor* or *Zedoary*, and the *Germans* are at this Time so fond of it that it is called by many *Contrayerva Germanica*. It is brought from the Mountains of *Switzerland* and *Savoy* where it grows in great Abundance, and is annually taken up in considerable Quantities for Use.

The Plant which produces it is of the Number of the *Polyandria Trigynia* of *Linnaeus*, and of the *Herbæ multifiliæ sive corniculatæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Anthora* and *Aconitum salutiferum*. The Plant grows to ten, twelve, or fifteen Inches high: The Stalk is single, rigid, and angular, somewhat hairy, and has Leaves placed alternately on it which resemble those of the common Monkshood, but that they are not of that shining green. The Flower is like that of the Aconite, of a pale yellow Colour, and of a not disagreeable Smell; the Seed-Vessels are a Set of membranaceous Pods placed close together; the Seeds they contain are rough, angular, and black. The Root consists usually of two or three of those tuberous Knobs we have described, rarely of a single one:

It had its Name *Anthora* or *Antithora* from its Virtues, it being supposed a certain Remedy against the Poison of the *Thora* or *Aconitum Pardalianches*, the Root of which was fatally mixed among our Gentian some few Years ago. It is also said to be good against Poisons of all Kinds, and against the venomous Bites of Animals, and in malignant Fevers, and even in the Plague. It is also used with Success against Worms by the Country People.

Notwithstanding all these Virtues attributed to it however by some Authors, the Root is suspected by others of being itself poisonous: *Clusius* and *John Bauhine* are of this Number, and the latter says that it is a violent Purgative. *Gesner* was the Man who boldly put the Matter out of Dispute; by taking a large Dose of the Root himself; he found no ill Effect from it, nor even the purging Virtue mentioned by *John Bauhine* in it. Later Practice has proved this Root to be an excellent Attenuant, and good in Fevers of the malignant Kind, especially those which arise from a viscid Colluvies in the Bowels, which have generally Worms for their original Cause, and which yield the sooner to this Medicine, as an excellent Anthelmintic. It is also good in *Tormina* of the Bowels; the Dose is from fifteen to thirty Grains, but it is best given in Form of a Bolus, because of its violent Bitterness and Acridness.

The poisonous Root *Thora*, to which this is esteemed a Remedy, is of two Kinds, the *Thora Valdensis*, or *Thora major*, and the *Thora minor*. They are described by the *Bauhines*, and other of the botanical Writers under the Names of *Aconitum Pardalianches major* and *minor*, and by *Tournefort* under those of *Ranunculus Cyclaminis folio Asphodeli radice major* and *minor*. The Roots of the larger of these were what we unluckily had among our Gentian. They were easily distinguished however from the true Gentian, as soon as the Alarm was given, by their being of a browner Colour without the Yellowness of Gentian, and of a poisonous Smell.

CHAPTER IV.

BEHEN,
Behen or Ben Root.

THERE are two Kinds of Roots kept in the Shops under the Name of *Behen* or *Ben*, very different from one another in Shape, Colour, and their whole external Appearance, and distinguished by the Names of white and red *Behen*.

The *Behen album* or white *Ben*, is a long and slender Root; we usually meet with it in Pieces of four, five, or six Inches in Length, and seldom much thicker than the middle Finger, often not nearly so thick as that; these are sometimes the whole Root, but more frequently only the middle Part of it, the Head and the slender End being cut off: We can always make out by these however, that the Root in its natural State is one of those long and slender ones, which grow in the Manner of the Liquorice. Its Surface is very full of Wrinkles and Furrows. It is of a considerably firm Texture, yet not heavy, very hard and woody, difficult to be cut, and with that it has a Toughness that makes it difficult to break it. It is of a dusky greyish Colour on the Surface, and white within. It is of a somewhat aromatic Smell, and of an acrid Taste, but not disagreeable, except by its Pungency.

It is to be chosen fresh, firm, and of an agreeable Smell; it is so much of the Shape and Colour of Multitudes of ordinary Roots, that it is easily adulterated with various Kinds of them; but the peculiar Smell it has, and which the others all want, plainly distinguishes it. With us it is so little used that there is no Danger of its being adulterated, scarce any Possibility of meeting with any thing under its Name. The ancient *Greeks* were not acquainted with the *Behen* Root; the *Arabians* first brought them into Use; they call them *Behen* or *Behemen*, and distinguish this white Kind by the Name *Behemen abiad*; the red they call *Behen* or *Behmen Ackmer*. The later *Greeks* have called both this and the red, *Hermodyctyls*, and have distinguished them by the Names of the red and the white *Hermodyctyls* in all their Works.

We have them both from the *Levant*, and they seem to be produced in many Parts of the *East*; but no where in such Plenty as about the Foot of Mount *Lebanon*.

The Plant which produces the *Behen album* or white *Ben* Root, is of the Class of the *Syngenesia Polygamia frustranea* of *Linnaeus*, and of the *Herbæ flore composito capitatae* of Mr. Ray, and is call'd by *Rauwolf* and *Tournefort*, who not only met with it on the Spot, but brought it into *Europe*, the *Jacca Orientalis patula Carthami facie, flore luteo magno*, and *Behemen Abiad Arabum*. The Stalk rises to two Feet high; the Leaves about its Bottom are long and large like those of the *Lapathum acutum*, but that they have two or three deep Jaggs where they are joined to the Stalk; those which grow on the upper Part of the Stalk have no Pedicles, but surround it in the Manner of those of the common *Perfoliata*. The Stalk toward the Top divides into a Number of small Branches, on which stand Heads like those of the common Knapweed, but with the small Flowers that adorn them yellow. The Seed which follows is winged with Down. The

The *Beben rubrum* or red Ben Root is a much larger Root than the white; we seldom however see it whole; what we meet with is cut into transverse Slices in the manner of Jalap, and many other of the larger Roots, for the Sake of drying. These are of the Breadth of a Shilling or more, and are firm and hard, of a rough and wrinkled Surface, and of a close internal Texture, moderately heavy, and not easily cut. They are throughout of a deep dusky red Colour, and have much the Smell and Taste of the white *Beben*, but both in a more languid and remiss Degree.

The red *Beben* is to be chosen sound, firm, and hard; the great Care is that it be not rotten: As to the rest, its Colour and Smell make it almost impossible to adulterate it. This is found with the white at the Foot of Mount *Lebanon*, and in many other Parts of *Syria*.

The ancient *Greeks* were wholly unacquainted with both these Roots; the later *Greeks* and the *Arabians* had them both in Use, and make frequent Mention of them: But the Accounts they leave us of things are so very imperfect, that it is not easy to gather any thing from them, in this Uncertainty in the particular Case before us, some have thought the white Ben the Root of the common white *Lychnis*, others that of the common wild Parsnep, and others have guessed it to be Zedoary, *Eringo*, and Angelica. As to the red, it has been supposed to have been the Root of a *Limonium* of Bistort, Tormentil of Valerian, and of a *Caryophyllata* or Avens. There remains no Way to find what the *Arabians* meant by the *Behmen* than to enquire upon the Spot, whether there was any thing at this Time called by that Name. *Rauwolf* took this Method, and discovered the Plant called white Ben; but we still are at a Loss about the red, till some body will take the Pains to enquire after it in the same Manner.

The same Virtues are attributed to both the Kinds of Ben, but the white is supposed to possess them in the greatest Degree; they are said to be great Cordials and Restoratives; they are said to be good also in nervous Complaints, and were much in Esteem from an imaginary Effect in encreasing the *Semen*; but the present Practice however wholly rejects them.

CHAPTER V.

SENEKA,

The Seneca Rattle Snake Root.

THIS is a Drug lately introduced into the *Materia Medica*, and which seemed at one time getting into Use apace, but is somewhat neglected again already. It is a Root of a very singular Figure: It runs to four, five, or more Inches in Length, and rarely exceeds the Thickness of the little Finger. It is not small or regular in its Form, but variously twisted and contorted, and divided usually into a Multitude of Branches. It has numerous Fibres hanging from these, and a Sort of membranaceous Margin which runs on each Side the whole Length of them. The greater Part of the Body of the Root rises into Protuberances at various Distances from one another; and these with its twisted Figure give it a very singular Appearance. It is otherwise of a tolerably smooth Surface, and is of a firm Texture, not very heavy,

heavy, but considerably hard, and when cut it shews a smooth and somewhat glossy Surface; it is of a pale and dusky yellowish Colour on the outside, and whitish within; it has no great Smell, but is violently acrid and pungent to the Taste, and somewhat aromatic. It is to be chosen sound and firm, and very acrid; there is no easy Way of adulterating or sophisticating it, its singular, contorted, and knotty Figure, and the Peculiarity of the membranaceous Edge running all along it on each Side, render it too different from all other Roots, to let any thing else be taken in its Place.

It was brought into *England* some few Years ago, by Dr. *Tennant*, a Physician, who had practised many Years in *Virginia*, where it is produced in great abundance, and where he had used it with great Success.

The Plant which affords it is one of the *Diadelphia Ostandria* of *Linnaeus*, and of the *Herbæ flore monopetalo vasculiferae* of Mr. *Ray*. It is described in the *Flora Virginica* by the Name of *Polygala Caule simplici erecto, foliis ovato lanceolatis alternis integerrimis racemo terminatrice erecto*. There generally arise a number of Stalks from the same Root, some of which stand erect, others lye upon the Ground; they seldom exceed ten or twelve Inches in Length, and are smooth and round: The Leaves are small and oval, or oblong, and at the utmost scarce an Inch in Length: The Flowers are absolutely like those of our common *Polygala* or Milkwort, but that they are smaller and white.

Dr. *Tennant*, who brought over this Root into *England*, gave it the Character of a powerful Diuretic, Diaphoretic, and Attenuant; famous for dissolving and breaking the sily Texture of the Blood: He adds, that it sometimes vomits, or goes off by Stool, and that the *Indians* use it as a certain Remedy against the Bite of the Rattle-Snake: They take the Root internally in Powder, and in Decoction, and apply it to the Wound, boil'd in Milk, by way of Cataplasm; and Dr. *Tennant* assures the World, he has known several cured by it: It has since been given in Pleurifies, and Perepnumonies, with great Success, and is recommended in all Cases in which the Blood is known to be thick and siley: The Roots of the *European Polygala* were on this Occasion try'd also in Pleurifies, and were found to have very good Effect, but inferior to the Seneka.

CHAPTER VI.

RHAPONTICUM,

Rhapontick.

THERE has been scarce more Uncertainty and Error, in regard to any Root of the Shops, than this Rhapontick; many have confounded it with Rhubarb, and have attributed to Rhubarb what the Antients have said of it; and many have confounded it with the Roots of different Plants of the Dock Kind, which, though somewhat like it in external Appearance, have not its Virtue.

The true Rhapontick is a large and thick Root, a Foot or more in Length, and divided into numerous large Branches: We seldom however meet with it entire in the Shops, what we see of it are usually Pieces of five or six Inches in Length, and of the Thickness of a Man's Thumb, sometimes more, but much oftener less; these are frequently divided into two or three Branches, but more usually

usually they are single, and of a gradually tapering Shape, often nearly of the same Thickness throughout. It is of a rude and wrinkled Surface, moderately heavy, of a somewhat spongy Texture and not hard, cutting smoothly and evenly through with a Knife, especially if rub'd with some unctuous Matter first, and leaving a smooth but not glossy Surface; it is externally of a dusky brown Colour, and within of a yellowish red, but without the fine Marbling, or Nutmeg-Grain of Rhubarb. When cut regularly and evenly through, it is seen to be compos'd of Fibres, which run regularly in Form of *Striæ* from the Center to the Circumference: It has something of the Smell of Rhubarb, but very faint; in Taste it is bitter, sub-astringent and acrid, and if it be held some Time in the Mouth is tough and glutinous. It is to be chosen in moderately large Roots, not too heavy nor too hard, and such as, when cut transversely, shew their *Radii* or *Striæ* very plain, and are of a spongy Texture; the Dock Roots that it is usually adulterated with want these Characters, and are in general easily distinguished by their Hardness, were there no other Characteristic.

Rhapontick has been known in the earliest Times we have any Account of Medicine in. This is the Root the antient *Greeks* call *Rha* and *Rheon*, and we do very wrong when we apply the Virtues they ascribe to their *Rha* or *Rheon* to our Rhubarb, which they were wholly unacquainted with.

The Description *Dioscorides* gives of their *Rha*, proves plainly that it was not what we call Rhubarb, but this Root; he says, it was of a dark dusky Colour on the Surface, unpleasant to the Taste, and mucilaginous when held long in the Mouth; and that it was light and spongy, and like the Root of the great Centaury in Shape, all this agrees perfectly with the Root we have been here describing, but not at all with Rhubarb.

The Plant which produces the true Rhapontick, or *Rha* of the Antients, is of the number of the *Enneandria trigynia* of *Linnaeus*. *Prosper Alpinus* has described it in his *Exoticks* under the Name of *Rhaponticum*, and *Tournefort* under that of *Rhebarbarum Dioscoridis et Antiquorum*. The Leaves of this Plant are large, and like those of the great Burdock, but rounder; they have large and prominent Ribs like those of Plantain, the Stalks grow to three Feet high, and are as thick as a Man's Thumb or thicker, hollow, striated, and bear at the Top Clusters of Flowers, which are small and white; the Seeds are triangular, and margined at each Angle. This Plant grows in great abundance on the Mountain *Rhodope* in *Thrace*, and in many Parts of *Scythia*, in its wild State; and it is to be met with in many of the *European* Gardens; we have it in *England* in several.

The true Rhapontick dry'd is a very valuable Medicine, and it were to be wish'd we might meet with it more frequently in the Shops; it is less purgative than Rhubarb, but it is considerably more astringent, and therefore is to be prefer'd to it in *Diarrhoeas*, and many other of the common Cases in which Rhubarb is given. It is an Ingredient in the *Venice Treacle*, and in some of the other old Compositions of the Shops, but in these Rhubarb is generally used in its Place. The common Root met with in the Place of Rhapontick, in such Shops as pretend to keep it, is that of the *Lepathum hortense rotundi folium*, or Monks Rhubarb, as we vulgarly call it.

CHAPTER VII.

SALEP,
Oriental Orchis Root, or Salep.

SALEP is a very singular Root in its Figure and Texture. We meet with it in small Pieces, the largest of them scarce exceeding three quarters of an Inch in Length, and half an Inch in Diameter; but the generality of them are much smaller; they are of an oblong or oval Figure, sometimes roundish, flat, and not strait, but usually somewhat turned or crooked one Way or other; they are of a somewhat wrinkled Surface, and of an extremely firm and tough Texture, moderately heavy, and very difficultly cut or broken; they have no external Bark or Rind, but are throughout of the same Colour, which is a dusky white, sometimes a little greyish, brownish, or yellowish; they are semi-transparent; they are very difficultly powder'd, but when reduced to Powder they readily melt into a Jelly in Water, a Tea-Spoonful of the Powder being sufficient to give the Consistence of a Mucilage to half a Pint. They have scarce any Smell, and have a Taste somewhat resembling that of Gum *Tragacanth*.

Salep is to be chosen clean, firm, and hard; it is very little liable either to Decay, or Sophistication. We have it from *Turkey*.

The Plant which produces it is one of the *Gynandria Diandria* of *Linnaeus*, and one of the *Herbæ bulbosæ affines* of Mr. Ray. It is a genuine *Orchis*, and is described by *Tournefort* under the Name of *Orchis fœmina procerior majore flore*. It is vastly plentiful in that Part of the World, and produces larger and finer Roots than any of the *Orchis* Kind with us. The *Turks* however have a peculiar Way of drying them, for our common Methods do not succeed; probably the same Process as is used with the *Ginseng* in *China* will be found to do; that is, the steeping the Roots for some Days in Water, then making them imbibe the Fume of a Decoction of Rice or Millet, and after this, hanging them up on Strings to dry. Something like this seems to be done to the *Turkish Salep* from its Transparency, which is a Quality peculiar to the Roots dry'd in this manner.

The People of the *East* are extremely fond of their *Salep*, they look upon it as one of the greatest Restoratives, and Provocatives to Venery in the whole vegetable World. We have it in Esteem here as a Restorative. The *Eastern* Nations have a kind of Liquor made of *Salep*, dissolved in Water with some Ginger and Honey; they drink this by large Draughts at a Time; we generally order it to be thrown into warm Water which it turns into a Jelly, and which, with the Addition of a small Quantity of Wine and Sugar, becomes very pleasant.

CHAPTER VIII.

CARLINA,
Carline Thistle Root.

THE *Carlina*, or, as others call it, the *Chameleon albus*, is an oblong Root of the common Kind, running directly down into the Earth in its natural State, not creeping as some others under the Surface. It is usually dried intire for medicinal Purposes, and is met with from four to eight Inches in Length, of about half an Inch or a little more in Diameter in the thickest Part. It is of a very irregular Surface, usually looking spongy, and as if eaten in many Places by Insects, and pierced with little Holes. It is of a tolerably firm Texture, moderately heavy, and not so hard but that it may be easily cut through with a Knife. It is of a reddish brown Colour on the Surface, and tolerably white within. It sometimes runs single its whole Length, gradually tapering in Thickness from the Head to the Extremity, and sometimes near the lower End it is divided into two or more Parts. It is of a very fragrant and agreeable Smell, and of an acrid, aromatic, and not disagreeable Taste.

It is to be chosen in large Roots, tough, not friable, and of a fragrant Smell; after it has been kept some time dry, it becomes brittle and dusty, and by its Loss of Smell testifies that it has lost its Virtues.

The Writers on the *Materia Medica* have been much divided in their Opinions, whether the *Carlina* or *Chamelion albus* of our Times, be, or be not, the *Chamelion albus* of *Dioscorides*; whether the *Chameleon albus*, *Ixia*, *Ixine*, and *Helxine* of the Greek Authors, and of *Pliny*, express all the same Plant; and that the same with our *Carlina*. This is a Dispute of the more Consequence to the World, as *Dioscorides* plainly speaks of poisonous Qualities in the *Ixia*, and yet agrees with all the rest, that the *Ixine* and *Chamelion albus*, as he elsewhere calls it, is a safe and a valuable Medicine. It appears on the nicest Enquiry into the Authors concerned, that the *Ixine* of *Theophrastus*, the *Helxine vera* of *Pliny*, and the *Chameleon albus* or *Carlina* of the modern Shops is the same Root, and that the *Chameleon albus* of *Dioscorides*, which is called also *Ixia* by *Pliny*, and is the *Chameleo albus Apulus purpureo flore* Gummiſer of *Fabius Columna*, the *Carlina Aculos Gummiſera* of *Caspar Baubine*, is the Root of a Plant of the same Genus with our *Carlina*, and is as innocent as it, and only differs from it as the Root of another Species of the same Thistle; and finally that though the *Chameleo albus* or *Carlina*, has been called *Ixia* by the Greek Authors, yet that it was not the poisonous *Ixia* they spoke of; but that under that Designation, they always mean some other Plant (it is not easy to say what) by this Name.

The Plant which produces the *Carlina* of the Shops, is of the number of the Syngeneſi: *Polygamia aequalis* of *Linnaeus*, and one of the *Herbæ flore composito capitatæ* of Mr. Ray. It is truly of the Thistle Kind, and is described by all the botanical Authors under the Name of *Carlina Acaulos Chameleon albus Matthioli*, and *Carlina Acaulos flore magno albo*. The Leaves of this Plant are long and prickly, and are usually disposed in a very regular Manner on the Ground, so as to form a Sort of Circle. They are five or six Inches long, and an Inch or a little more in Breadth, and are deeply divided at the Edges. In the very Center of this Circle stands the Flower

Flower which has no Pedicle, but is fixed down to the Root, and is like the Heads of our other Thistles, rough and prickly, and furnished with a Multitude of white Floscules, together composing what is called the Flower. The Seeds are winged with Down like those of the common Thistles.

This is the Plant which produces the true *Carlina*, the *Ixine* of *Theophrastus*, and the *Helxine vera* of *Pliny*. The other Species called *Chamæleon albus* by *Dioscorides*, and *Ixia* by the same Author sometimes, and by *Pliny*, is described by *Fabius Columna* under the Name of the gummiferous white *Chamæleon* Thistle of *Apulia* with purple Flowers. It is so nearly allied to the other, that all the Difference is in the Flowers being red, whereas that of the other is white, and the Leaves being larger and deeper indented, as also more white and woolly. The Root of this Plant however is thicker than that of the other, and when cut it yields a milky Liquor; and is also of a much stronger Smell. The milky Juice that flows out of this Root when wounded, immediately condenses with a Kind of Gum, which is at first white, and sticks like Birdlime to the Fingers; but it afterwards grows harder and darker coloured, sometimes indeed it becomes almost black. The Root of this Plant is not the only Part of it that abounds with this Gum. The Head exsudates it also in some Quantity.

We do not know this Gum at present in the *English* Shops, but it is preserved in *Italy*, and has been kept as a Medicine many Ages ago. The Peasants of *Apulia* are at this time the People who gather it in greatest Quantity; they call it *Cera di Cardo*, Thistle Wax. The ancient *Greeks* called it *Ixon* and *Ixia*, and *Theophrastus* *Mastiche acanthice*, or Thistle Mastich. It is of a pleasant Smell, and *Dioscorides* tells us that the *Greeks* used it as they did Mastich.

The Root of the *Carlina* is esteemed sudorific, cordial, and alexipharmic: It is not kept in our Shops, but in some other Nations it is as frequent in Prescription on these Occasions, as *Contrayerva* is with us. Great Virtues are attributed to it also in malignant and pestilential Fevers. The Ancients gave it in very free Doses, and tell us that it was a Remedy for Worms, particularly for that troublesome Kind the broad or tape Worm. They also had a great Opinion of it as an Alexipharmic, and gave it against Poisons and the Effects of venomous Bites of Animals.

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CHAPTER IX.

IMPERATORIA,
Masterwort.

THE *Radix Imperatoriæ* is of the Number of those which stand very highly recommended by the medical Writers of different Ages, yet are disused in the present Practice; and at the utmost only received as Ingredients in some Compositions. It is to be met with fresh among the People who sell the medicinal Herbs, but the Demand for it in any other State is so little, that our Druggists are not at the Trouble of drying or keeping it. It is an oblong and irregularly figured Root sending out a vast Number of Fibres. It is usually met with in Pieces of three, four, or five Inches long, and of about half an Inch in Thickness; it is not strait, but variously contorted, and usually bent two or three Ways in the same Piece. Its Surface is wrinkled, sometimes with annular, and sometimes with longitudinal Furrows, and is moderately heavy, very solid and fleshy while fresh, and considerably firm and hard when dried. It is of a deep dusky brown on the outside and white within. It cuts evenly and easily with a Knife: Its Smell is very aromatic and agreeable, and its Taste acrid and aromatic to a very great Degree; the smallest Piece of it chewed a little while fills the Mouth with *Saliva*.

Imperatoria Root is so little used that there is no Danger of its being sophisticated: As to its Choice if met with dry, all the Caution that is requisite is to observe that it be sound; but the best Way for any who intend to use it, is to dry it themselves.

Imperatoria was unknown to the ancient *Greeks*; or if they had any Knowledge of it, it was under some other Name; and their Accounts of it so imperfect that we cannot make out any thing by them. This we suspect to be the Case in regard to many of the medicinal Plants now in Use, and as People imagine, not named by them; for before the Introduction of chemical Remedies into Medicine, Simples were much more studied than now.

There has been some Confusion in regard to Words about the *Imperatoria*; that Name has been given to some other Plants beside that properly called by it, the Root of which we have here described. The *Meum* or Spignel, and the *Laserpitium* or Laserwort, have both been called by this Name; and to heighten the Confusion, many other Names have been given to the *Imperatoria*, as *Astrantia*, *Magistrantiæ Ostrucium*, and *Osteritium*.

The Plant which produces the Root here described is of the Number of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferæ* of Mr. Ray. It is described by all the botanical Writers under the Names of *Imperatoria vulgaris*, *Imperatoria major* and *Astrantia Dodonæi*. Its Root creeps under the Surface of the Earth, and has a great Number of Fibres. The Leaves are alated and composed of three Segments: The Stalk is thick, hollow, and striated, and rises to two or three Feet high. The Flowers are white, and disposed in Umbels. The Fruit which succeeds these is composed of two flat oval Seeds.

The

The *Imperatoria* Roots we meet with are cultivated in Gardens with us, but tho' they are large and fair, they want much of the Fragrancy and Virtues of such as grow wild upon the *Alps* and *Pyrenean* Mountains.

The Root distill'd yields a very considerable Quantity of a fragrant essential Oil. It is a Sudorific, Cordial, and Carminative. *Hoffman* recommends it in a very remarkable manner in Flatulencies and Cholicks, and scarce less ardently for the promoting the Menfes, and as a Provocative. It is found to assist Digestion, and to do good in many Disorders of the Stomach, and is given in malignant Fevers, and in the Plague itself. With all these Virtues, many of them not attributed to it by fancyful Writers, but really possessed by it, it is a Reproach to us that we do not bring it more into Use.

CHAPTER X.

MEUM,
Spignell.

MECUM, or, as it is generally call'd, *Meum athamanticum*, is one of the smaller Roots, and is usually found with a vast Number of Filaments or Fibres at its Head, in the manner of the Spikenards, and owing their Origin to the same Cause.

It is an oblong and irregularly figured Root, not single as many of the Roots that descend perpendicularly into the Earth as it does, are, but divided usually into a great Number of Ramifications. We generally meet with it of two, three, or at the utmost four Inches long, and about the Thickness of a Man's little Finger in the largest Part: It is somewhat wrinkled on the Surface; the Furrows are not deep, and generally run longitudinally, and sometimes in Roots that have been taken up at a good Season and have been carefully dry'd, there are scarce any Wrinkles observable at all. It is of a tolerably firm and solid Texture, but moderately heavy, and not so hard but that it cuts easily through with a Knife. It is of a brownish red Colour and somewhat paler, but of the same ferrugineous Tinge within; when cut evenly through, it is found not to be throughout of the same Texture, but to contain within a spongy lax Substance in the manner of a Pith, round which the firmer cortical Matter is regularly disposed; this medullary Part, when the Root is fresh, is almost white, and even afterwards it is always much paler than the rest. It is very aromatic and fragrant to the Smell, and is of an acrid and aromatic Taste, but with a Mixture of a disagreeable bitter in it.

Meum is to be chosen in the largest and most branch'd Roots, firm, solid, sound, and of a good Smell. This last indeed is the great Character of its Goodness, for it loses much of its Virtues in keeping, and with them much of its Smell; and as it is a Root not much used, there is so great a Probability of meeting with it old and spoil'd, that the Accident ought to be guarded against.

This Root has been known in Medicine as long as we have Accounts of any thing; the earliest *Greek* Writers describe it under the Names of *Meon* and *Meion*, whence the *Latin* *Meum*, and the *Arabians* have call'd it *Mu*. The addition of *Athamanticum* to its Name is variously accounted for, some derive it from the Name of *Athamas* a King of *Thebes* who first brought it into Use,

Use, and others more probably from its being found in great Plenty and Perfection, on *Athamas* a Mountain in *Sicily*. The Name has been by some very improperly given to many Plants, beside the right one, whose Roots we have described, and no one of which answers at all to the Description *Dioscorides* gives of the Plant, as to the *Imperatoria*, *Angelica*, and some Species of Fennel of *Cachrys*, and of the *Myrrhis* or *Chervill*, to the *Thysselinum* of *Pliny*, and to the purple flower'd *Alpine Phellandrium* of *Tournefort*. Nor have there been wanting on the other hand, to compleat the Confusion, many other Names for the genuine *Meum*. It has been call'd a *Tordylium*, an *Anethum*, a *Daucey*, a *Seseli*, and an *Imperatoria*, and also *Radix Ursina*, *Sistra*, *Spicula*, and *Trinochiella*.

The Plant which we determinately call *Meum*, and which *Dioscorides* and the rest of the antient *Greeks* call'd by the same Name, and the Roots of which we have been describing in this Chapter, is of the Number of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbelliferae* of Mr. *Ray*. The Plant grows to two Feet or more in Height. Its Leaves are of a deep dark green and very finely divided, resembling in some Degree those of Fennel, but that they are composed of yet narrower or slender Segments. The Stalks are hollow and striated, and the Flowers, which are small and white, grow in moderately large Umbells or Clusters, and are succeeded each by two oblong and gibbous striated Seeds. The Plant is commonly call'd *Meum* by the botanical Writers, but *Tournefort* observes that it is a true Species of Fennel. The Pedicles of the Leaves are firm and stringy, naturally dividing into long and tough Filaments. The Root is perennial, and as these Fibres of the Pedicles are too firm to perish, and rot with the rest of the Stalk, they form that tuft of hairy or filamentous Matter, which is always found in greater or lesser Quantity about every Root of *Meum* that is more than one Year old.

We have the Plant wild in some Parts of *England*; but not in any Plenty. It is frequent in *Spain*, *Italy*, *Germany*, and *France*, and the Roots we use are generally imported from one or other of these Places. *Pliny* tells us, that in his time it was very scarce in *Italy*, and was propagated by the People who used it in Medicine; but either the *Romans* were then but little acquainted with the Products of their own Country, or this Plant has strangely multiply'd itself there since.

The Roots of *Meum*, on Analysis, yield a large Quantity of an essential Oil, in Part pure and fine, in Part thick, foul, coarse, and fetid; it also yields a Quantity of urinous Spirit not inconsiderable, and a great deal of an acid Phlegm. It is in Consequence of these Principles an Attenuant and Diuretic. It is good in Cholicks, Flatulencies, Suppressions of Urine, and of the Menfes. The old Authors tell us, that large Doses of it frequently repeated, and that for a long time together, were apt to create Pains and Disorders in the Head, but they all say great things in its Praise when given properly. Its Dose is from ten Grains to thirty in Powder, but it is now much disused, and would not be kept at all in the Shops, but as an Ingredient in some of the standing Compositions.

CHAPTER XI.

ASARUM,
Asarabacca.

ASARABACCA is of the Number of the small and slender Roots. We meet with it in Fragments of four or five Inches in Length, and of the Thickness of a Crow Quill. These are not even or regular as many other of the smaller Roots, but variously knobbed and jointed, as it were rising into Protuberances, and usually very crooked. They are furnish'd with a great many Fibres, which run strait down from several Parts of them, and are usually left on them by the People who dry them for Use. The Roots themselves creep horizontally on the Surface of the Earth, or at the most they are hardly buried in it. They are when dry'd, and as we see them among the Druggists, of a wrinkled Surface, of a tough and firm Texture, not easily broken with the Hands, but very readily cut through with Scissars or with a Knife, as they have no woody Fibre in their Center. They are of a dusky whitish brown Colour throughout, only it is a little darker on the Surface than within; they are of a brisk aromatic Smell, and of an acrid and disagreeable Taste, with something of an astringent Austerity in it.

Asarabacca is to be chosen new, tough, and of a good Smell. It is not much subject to Adulteration, but when any thing of that Kind is attempted, the pale Colour and pungent Smell of the genuine Roots distinguish them from the Counterfeits. The best *Asarabacca* is that brought from the *Levant*, the Roots of this are larger, more plump, and of a better Smell than those of the more Northern Parts of the World; it is very plentiful, wild in *France* and *Germany*, and we have Abundance of it in our Gardens, but the Roots of such when dry'd are much inferior to the others.

The Plant which affords the *Asarum* Root is one of the *Dodecandria Monogynia* of *Linnaeus*, and one of the *Herbæ flore apetalæ five stamineæ* of Mr. Ray. It is described by all the botanical Writers under the Name of *Asarum*, *Asarum vulgare*, and *Nardus rustica*. Its Leaves are roundish, thick, and of a shining green, they stand single on Pedicles of three or four Inches long: the Flowers grow almost close to the Ground, and are of a dusky greenish purple in Colour. They are succeeded by a Fruit composed of six Seeds. It is a Root of considerable Virtues in Medicine, but somewhat rough and unmanageable in its Operation. It is a powerful Diuretic and Promoter of the Menstrues; it operates also, and that violently, by Vomit and Stool. It is good in Obstructions of the Viscera, particularly of the Liver and Spleen, and has been known to do great Service in Jaundice and Dropsies. Quartan Agues have also been cured by it when long Courses of other Remedies have fail'd. It is to be given in Infusion in small Doses.

CHAPTER XII.

ESULA,
Spurge Root.

THE *Esula* as we meet with it in the Shops is not an entire Root, but only the cortical Part of a Root separated from its inner woody Matter: We meet with it in long and slender Pieces, roll'd up in the manner of Cinnamon, or of the smaller Pieces of *Peruvian Bark*: It is commonly two, three, or four Inches in Length, and of the Thickness of a Crow or Goose-Quill; there is some larger than this, but it is not the genuine *Esula*, but the Root of another Plant of the same Genus; the true *Esula* is of a smooth Surface, and of a firm Texture, not very easily cut nor broken; it is light, and is of a reddish brown Colour on the outside, and of the same sort of Colour, but with less of the brown among it, within: It has scarce any Smell, but is very acrid to the Taste, and fills the Mouth with *Saliva* as soon almost as it is received into it.

It is to be chosen moderately firm and hard; it is usually of a smooth Surface, and ought always to be so; what is wrinkled is such as has been taken up at a wrong Time, or ill dry'd.

The Plant which produces it is of the number of the *Polyandria Monogynia* of *Linnaeus*, and of the *Herbæ flore tetrapetalo anomalæ* of Mr. Ray. It is of the Tithymal or Spurge Kind, and one of the sharpest and most acrid of them, and is described by Authors under the Name of *Esula minor*, *Pityusa*, and *Tithymalus Pineus*: It grows to eight or ten Inches high: Its Leaves are long and narrow, and stand very thick upon the Stalks, which afford a great Quantity of an acrid milky Juice when broken: The Flowers are small and of a yellowish green.

It is a very powerful Medicine, but so rough a one withall, that it is hardly safe: It purges violently both by Vomit and Stool, and is recommended in Dropsies, but is to be used with great Caution: It is a good Method to macerate it a Day or two in Vinegar before it is used.

CHAPTER XIII.

RADIX CYNOGLOSSI,
Hounds Tongue Root.

THE *Radix Cynoglossi* is a long and moderately large Root: It frequently grows to the Thickness of a Man's Thumb, sometimes more, and though it grows gradually smaller toward the Point, yet Pieces of nine or ten Inches long are often met with, which at their smallest End are as thick as ones little Finger: Its Surface is tolerably smooth, and gives rise to several Fibres: It is moderately heavy, and of a somewhat tough and firm Texture, but not so hard but that it pretty freely cuts through with a Knife: Its Colour on the outside is a dark dusky brown, approaching to black, but with a Mixture of redness in it; within it is white: Its Smell is disagreeable, and of the narcotic Kind; its Taste somewhat vapid and mucous, but with a sort of Sweetness afterward.

The

The Plant which affords it is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Herbæ asperifoliæ* of Mr. Ray. It is described by all the botanical Writers under the Names of *Cynoglossum*, *Cynoglossum majus*, and *Cynoglossum vulgare*. It grows with us by Way-Sides, and in uncultivated Places: It rises to about two Feet in Height; its Stalks are round and somewhat hollow, very much branch'd, and cover'd with a fine white Down. The Leaves are long and narrow, of a pale green Colour, and hoary; they stand on the Stalk without Pedicles, and are pointed at the Ends. The Flowers are small and of a hollow Form, divided into five Segments at the Edge, and of a dark purple Colour: The whole Plant has a strong and disagreeable Smell, such as puts many People in mind of the rank Savour of a Kennel of Hounds. The Flowers are each succeeded by four Capsules of a compress'd Form, very rough on the Surface, and adhering to every thing they touch; in each of these is contained a flat Seed.

The Bark, or cortical Part of the Root, has much more Virtue than any other Part of the Plant; it is glutinous in the Mouth, and has a somewhat saline, bitterish, and styptic Taste when long chew'd. Chemically analysed it yields first a Phlegm limpid with very little Smell, and a somewhat saline Taste; then a reddish, sub-acid, and austere Phlegm; after these a small Portion of an alkaline Phlegm, and of a thick brown Oil of a very ill Smell. The Remainder in the Retort, calcin'd, yields a moderate Proportion of fix'd Salt by Lixivation, and that is purely of the alkaline Kind.

The Root of Hounds Tongue is emollient, anodyne, and narcotic; it obviates the Acrimony of sharp Humours, and is a good Medicine in Catarrhs; it is also a gentle Astringent, which, with its other Qualities, renders it extremely useful in Diarrhœas, Dysenteries, and Hæmorrhages of all Kinds, and in Gonorrhœas, and the *Fluor Albus*. A Decoction of an Ounce of the Root in a Pint of Water, with the Addition of a little red Wine, Cinnamon, and fine Sugar, makes a pleasant as well as powerful Medicine in Diarrhœas, and may be given without Fear in all Cases of that Kind, in which any Astringent can be safe. Externally used it is emollient, and is an excellent Ingredient in Cataplasms, Fomentations, Ointments, and Plaisters, as are also the Leaves of the Plant. It has been recommended by some as a certain Remedy even in scrophulous Cases: But Ray tells us of a Method of using it for that Purpose, a better than which might indeed easily have been thought of, in which, though it miss'd of the intended Effect, it had another not expected. A Child in a scrophulous Complaint, whose Head and Cloaths swarm'd, as we express it, with Vermin, had the Roots of Hounds Tongue, fresh dug up, continually hung about his Neck by way of Remedy; and though these miss'd curing the Disease, they destroy'd the Vermin.

The Hounds Tongue Root has given Name to a narcotic Pill of the Shops, of which it is a capital Ingredient, and which has been used very frequently, and with great Success against Catarrhs and Coughs of the most troublesome Kind, and against Epilipsies.

CHAPTER XIV.

SAXIFRAGA,

Saxifrage.

MANY different Plants have been call'd *Saxifraga* and Saxifrage, from their supposed Power of dissolving the Stone in the human Bladder, a Power which very certainly none of them possess. What we keep in the Shops at this Time under the Name of Saxifrage, is the Root of a little Plant, distinguish'd by the Name of white Saxifrage, from the Colour of its Flowers; and this Root is of so singular a Figure, that People unacquainted with its History, have mistaken it for a Seed, and it is now pretty universally known under the Name not of Saxifrage Root but Saxifrage Seed.

It is a small and granulated Root; sometimes we meet with Clusters of these Granules together, with a number of Fibres hanging from them; in this Case we have the whole Root: But more frequently we meet with only the Granules loose and single, and without their Fibres; and it has been from the Sight of these only, that People have been induced to suppose the Drug a Seed. These Granules are usually roundish, sometimes oblong, and often larger at one End than at the other; they are of the Size of a small Vetch or Tare, and are of a perfectly smooth and even Surface, of a somewhat lax and spongy Texture, not over heavy, and cut very easily with a Knife: They are of a purplish Colour, varied with white in different Proportions, but sometimes, when they have been ill dry'd, they are only of a dusky brown: They have scarce any Smell, and are of a bitterish and unpleasant Taste. Saxifrage Roots are to be chosen fresh dry'd, plump and full; those which are light and wrinkled have been gather'd at a wrong Time of Year, and have very little Virtue.

The Plant which produces them is of the number of the *Decandria Digynia* of *Linnaeus*, and of the *Herbæ Pentapetalæ vasculiferae* of Mr. Ray. Its Leaves are roundish, and indented about the Edges: The Stalks are round, and grow to six or eight Inches high; the Flowers are white and beautiful; the Seed-vessels which follow them are divided into two Horns as it were. The Root is full of those Granules, which are the Saxifrage of the Shops, about the Bottom of the Stalks, and propagates itself by means of them.

Saxifrage, in the Days of the old Writers, does not seem to have been the Name of this Plant. *Dioscorides* tells us, that what they meant by that Word was a shrubby Plant full of Branches, and, as he says, resembling *Epithymum*; to this odd Description he adds, that it grew in rocky Places: So short and imperfect a Description as this, has left the later Writers much at a loss, as to what Plant was meant by it: Some have taken it for a Species of *Satureia* or Savoury, some of *Serpyllum* or wild Time; nay, there have not been wanting some, who suppos'd the common *Serpyllum* to be the Plant; and others have made it a Species of *Lychnis* or Catchfly. Till we can make out what Plant the Antients meant by the Name Saxifrage, we shall not be able to reap any Benefit from the Accounts they have left us of its Virtues, however interesting they may appear to us. As to our own Saxifrage, described in this Chapter, we know it to be a good Attenuant and Diuretic: It is good in all nephritic Cases,

Cases, and in Obstructions of the Menfes. We are told also of great Virtues it has in Obstructions of the Viscera, and in Jaundices and Dropsies, which seem to agree well enough with what we really know of it, though we have not Experience to warrant them.

R O O T S

Brought fresh to the S H O P S.

C H A P T E R I.

ALTHÆA,
Marshmallow.

THE *Radix Althææ* is a long and moderately thick Root, and as it is perennial it usually, when taken up from a Plant of some Years standing, has a number of smaller Roots about it, connected to it Sideways, at the Head, and running down parallel with it: The larger main Root grows to an Inch or more in Diameter, though we more usually meet with it at about half that Size; it is often twelve or fourteen Inches in Length, and goes gradually tapering from the Head to the Extremity, and is all the Way down furnished with short Fibres; it is of a pale yellowish white on the outside, and perfectly white within; considerably hard to cut, and of a close Texture: Its Structure is fibrous, so that though it be very tough, and difficult to be broken transversely, it easily splits; and any small Fragment of it raised in any Part, readily separates itself all along the Root: It is moderately heavy, and when dry'd becomes almost of a woody Hardness; it has scarce any Smell, and very little Taste, but what it has is not disagreeable. It is full of a slimy mucilaginous Liquor, and communicates a gelatinous Quality to Water that it is boil'd in.

The Plant which affords it is one of the *Monadelphia Polyandria* of *Linnaeus*. It is a Native of our own Country, and grows in damp Places, and by the Banks of Rivers within the Reach of the Sides: It is very plentiful in many of these Places, but it thrives so well in Gardens, that most of the Roots we see brought to Market are cultivated near *London* for that Purpose.

The Plant grows to three or four Feet high: Its Leaves are roundish, but terminate in Points, they are white and soft like Velvet. The Flowers are like those of the common Mallow, but paler colour'd, almost white. The Seeds are placed in the same manner, and are of the same Form with those of the common Mallow. The Root shou'd be taken up for Use when full of Juice, and the cortical Part only used; the Middle or central Part, which is harder and has less Virtue, shou'd be rejected. A Pound of fresh Marshmallow Root, distill'd in a Retort, yields first a little more than five Ounces of a limpid Liquor without Smell, but of a somewhat obscurely saline Taste; after this comes over about twice that Quantity of a Phlegm of a mix'd Taste, somewhat more saline than the first, and withal somewhat austere and acid; then about

two Drams and a half of thick Oil like Butter, so heavy that it sinks in Water. The Remainder in the Retort weighs only nine Drams, and is a black Coal; this calcined and lixiviated yields about four Scruples of a fix'd alkaline Salt by Lixiviation.

The Marshmallow Root is a very valuable Medicine: It is emollient and diuretic: It gives great Relief in Disorders of the Kidneys and Bladder, whether they arise from a too great Acrimony in the Urine, or from Gravel; its mucous Juice sheathing the Salts of the Urine, and its emollient Qualities giving an easier Passage to the Gravel that loads the Vessels: It is good also in all Disorders of the Breast and Lungs, arising from a thin acrimonious Phlegm; in both these Cases a Decoction of the fresh Root is the best Form of giving it; in Diarrhœas, where the Humor is so sharp as to erode the Intestines; and even in Dysenteries a strong Decoction of Marshmallow Root, given Clysterwise, is also of great Use. Externally in Form of a Cataplasm it is excellent for softening and maturing hard Tumors; and a Decoction of it, by way of Fomentation, for taking down Swellings, and preventing Inflammation.

Dr. Seger, in the *German Ephemerides*, affirms, that the *Radix Althææ* is of an acrimonious Nature, because on using a Cataplasm of the Root alone, boil'd in Water, the whole Limb to which it was apply'd, was cover'd with Pustules of a very painful and sharp Kind; but the Matter of these Pustules, unquestionably, was there before, and wanted only Heat to assist it to appear in that Form, which it would have done on the Application of any other Cataplasm, whatever it had been made of. This Root is indeed so far from being acrimonious in its Nature, that a Mucilage of it is one of the best Applications that can be used for taking off the Pain, rais'd by the Acrimony of Sinapisms and other things of that Kind. We may see by this however, how many a good Medicine may fall under Censure, from the imperfect understanding its Effects.

When Decoctions of Marshmallow Roots are intended for internal Use, they must not be made too strong; as too heavy a Mucilage is apt to offend the Stomach: An Infusion made by pouring boiling Water on them, is indeed greatly preferable to a Decoction in most Cases. Beside the Use of this Root in extemporaneous Practice, it is an Ingredient in the Syrup, and Ointment, which take their Name from it, and in several other of the Compositions of the Shops.

C H A P T E R III.

RADIX PETROSELINI, *Parsley Root.*

THE *Radix Petroselinæ* is one of the long Roots that penetrate perpendicularly into the Earth. It grows to the Thickness of a Man's Thumb, and to five, six, or more Inches in Length. It is always thickest at the Top, and from thence grows gradually taper to the other End, where it sometimes divides into two or three Branches, sometimes terminates in a single Fibre. It is of a smooth Surface, and of a considerably firm Texture, very tough and hard to break transversely, but easily cut through with a Knife, or split lengthwise.

wife. It is of a white Colour both within and without, and of a fragrant Smell, and an aromatic and acrid Taste.

The Plant which affords it us is the common Parsley of our Gardens, one of the *Pentandria Digynia* of *Linnaeus*, and of the *Herbæ umbellifere seminæ brevioris* of *Ray*. Chemically analysed it yields first a colourless Phlegm, almost insipid, but of a somewhat obscurely saline Taste, and of the Smell of the Root; after this comes over a large Quantity of an acid and somewhat austere Phlegm; then a smaller Quantity of a reddish empyreumatic Phlegm, containing a large Portion of a volatile urinous Salt, and a thick dark brown Oil. The Remainder, in the Retort, is a light black Coal, which, calcin'd in an open Fire, yields a small Portion of a fix'd alkaline Salt by Lixiviation.

Parsley Root is one of the five greater opening Roots: It is an Attenuant, Aperient, Detergent, and Diuretic: It is given in Diet-Drinks in chronic Cases arising from the Obstructions of the Viscera, and is in any Form a powerful Diuretic.

CHAPTER III.

RADIX RUSCI, *Root of Butcher's Broom.*

THE *Radix Rusci* is one of those which do not penetrate perpendicularly into the Ground, but creep under the Surface of it. It is of an irregular Figure, and is usually met with in Fragments of six, eight, or ten Inches long, and of the Thickness of a Man's Thumb: Its Surface is very uneven and irregular, sometimes crack'd and full of Hollows, and at others full of Protuberances in several Parts: It sends out a great many Fibres all along, and is usually crooked, and often branch'd; its Texture is considerably dense and firm, it is heavy, and very tough, and is of a pale Colour on the Surface, and white within; it has scarce any Smell, but a slightly acrid and disagreeable Taste.

The Plant which rises from it is one of the *Diœcia Syngenesia* of *Linnaeus*, and one of the *Herbæ Bacciferae* of Mr. *Ray*. It is common in our Heaths, and other dry barren Places, and is described by all the botanical Writers under the Name of *Ruscus*, *Bruscus*, and *Scopa regia*. It is a low but woody Plant; its Stalks are green, but very tough and woody, they grow to a Foot or more in Height, and are thick set with Leaves, of the Shape of those of the common Myrtle, but very thick and rigid, and terminating in a Spine at the Point. The Flower is small, and of a greenish white; it grows not on a Pedicle, as in the generality of Plants, but on the middle Rib of the Leaf, and is succeeded by a round Berry, of the Bigness of a Pea, green at first, but as red as Coral when ripe.

The *Radix Rusci*, chemically analysed, yields first a colourless Phlegm of no remarkable Smell, but of a very slightly acid Taste; after this a Phlegm still colourless, in the first Runnings more acid, and toward the last austere; and after this a Quantity of a thick brownish Oil. The Remainder in the Retort, calcin'd in an open Fire and then lixiviated, yields a small Quantity of a fix'd alkaline Salt, about two Scruples from every Pound of the Root.

The Root is one of the five aperient ones, and is celebrated by Authors as a very powerful Attenuant, and Resolvent: It is good in all chronic Cases, and is frequently prescribed in Diet-Drinks intended to open Obstructions of the Viscera, or to promote the Discharge by Urine.

CHAPTER IV.

RADIX GRAMINIS,

Grass Roots.

THE *Radix Graminis* is a small Root, of the Thickness of a Wheat-Straw, and of a very considerable Length; it runs along just under the Surface of the Ground, and generally is so entangled with the other Roots of the same Plant growing near it, that it is not to be taken up singly, but in Tufts or Bundles. We meet with it of the Length of two or three Feet; it is knotted or jointed, at certain Distances, of four, five, or six Inches; its Surface elsewhere is very smooth and glossy; its Colour is a yellowish white on the Surface, and a purer white within: It is of a firm Texture, extremely tough, but easily cut through with a Knife, or Scissars, and has scarce any Smell, but a sweetish herbaceous Taste, with somewhat austere or styptic, after it has been some Time held in the Mouth.

The Species of Grass, of which this is the Root, is the great Torment of our Gardners and Farmers: It grows every where in cultivated Ground, and if not carefully destroy'd, will starve and destroy whatever is sown there. It is one of the *Triandria Digynia* of *Linnaeus*, and is described by all the botanical Writers under the Name of *Gramen Caninum*; *Gramen arvense radice repente*, and *Gramen repens Triticæa Spica*. The Stalks are slender, but very tall; the Leaves stand singly at the Joints four or five on the Stalks; the Spike consists of two Series of Flowers, and afterwards of Seeds, which are oblong, of a brownish Figure, and somewhat like Grains of Wheat in Shape.

Grass Roots, moderately dry'd and distill'd in a Retort, yield first a small Portion of a limpid almost insipid Phlegm, with only a faint Acidity, and without any Smell; after this comes over a more acid Phlegm, the last Runnings of which are very strongly so, and withal very austere; after this a larger Quantity of a brown empyreumatic Liquor, very acid, very austere, and of a saline Taste; with these and a small Portion, about three Drams from the Pound, of a brown, foetid, and thick Oil. The Remainder in the Retort, calcin'd and lixiviated, yields a fix'd alkali Salt, in the Proportion of about two Scruples and a half from the Pound. The Taste of the Roots of Grass is plainly saccharine, but has the Austerity of the astringent Plants with it: They are cooling, aperient, and diuretic; they are given with great Success in Decoction in Obstructions of the Liver and Spleen, and in Suppressions of Urine.

Hoffman greatly recommends this mild and gentle Attenuant in Cases of Obstructions of the Viscera, attended with Feverishness; for he observes, that it effects its Business without the least heating of the Parts, and that it excels most other of the vegetable Aperients in this Respect; also that it has an after Astringency, that when the Cause of the Obstruction is remov'd, strengthens the Parts, and restores them to their proper Tone. The Country People give
Children

Children a strong Decoction of Grafs Roots to destroy Worms, but with what Success is not certainly known. The express'd Juice of the Roots is recommended in Spittings of Blood, and in Hæmorrhages of all Kinds; and Authors tell us of great Cures perform'd by it. It is a common Ingredient in diuretic and aperient Decoctions, and is also an Ingredient in the Syrup of Marshmallows, and some other of the Compositions of the Shops.

CHAPTER V.

RADIX ASPARAGI,
Asparagus Root.

TH E Asparagus Root is composed of a great number of single and separate Parts, all arising from the same Head. These are two Feet or more in Length each, and of the Thickness of a Goose Quill: Their Surface is tolerably smooth, they are moderately heavy, and very firm and tough, so as to break transversely with great Difficulty, but they easily split all the way up: They are of a tolerably firm Texture, and of a dusky brownish white Colour on the outside, and of a pure white within; they have no remarkable Smell, but are soft and mucilaginous in the Mouth, and of a somewhat sweet Taste.

They are to be chosen large, firm, and hard, and full of Juice. The Plant which affords them is one of the *Hexandria Monogynia* of *Linneus*, and of the *Herbæ Bacciferae* of Mr. Ray. It is very well known in our Gardens, where it is cultivated for the sake of its first Shoots for Food. The botanical Authors have all described it under the Name of *Asparagus Sativus*, and *Asparagus Hortensis*. The Plant, when fully grown, bears very little Resemblance to the young Shoots we are acquainted with at our Tables; it grows to three Feet in Height; its Stalk is slender and branch'd; its Leaves narrow, and an Inch long; its Flowers small and of a pale green, and its Berries of the Size of a Pea, and of a fine glossy red Colour.

A Pound of fresh Asparagus Roots, distill'd in a *Balneum Mariæ*, yield first somewhat more than half their Weight of a colourless Phlegm, of an herbaceous Smell, and a somewhat fainty saline Taste; after this come over about two Ounces of a still colourless but subacid Liquor. The Remainder in the Alembic, being put into a Retort, yields first near an Ounce of a reddish, acid, acrid, and austere Liquor; after this about three Drams and half of an alkaline empyreumatic Liquor, containing a volatile urinous Salt, and about two Drams of a thick Oil. The Remainder in the Retort, calcin'd in an open Fire and then lixiviated, yields about half a Dram of a fix'd alkaline Salt.

The Asparagus Root is esteem'd a powerful Diuretic, and has the Credit of being one of the five opening Roots of the Shops: It is given in Decoction, but that seldom alone, but with the other diuretic Roots; and it is an Ingredient in the Syrup of Marshmallows, and some other of the Compositions of the Shops. The young Shoots of Asparagus, as we eat them at Table, have evidently a very great diuretic Virtue; they communicate also a remarkably disagreeable Smell to the Urine, and that within a very little Time after eating.

CHAPTER VI.

SCILLA,
The Squill.

THE Squill is a large Root of the bulbous Kind: It is frequently of the Size of a Man's Fist, sometimes larger: It is of two Kinds, the white and the red, differing little otherwise than in Colour, though the Roots of two different Species of Plant. The white is sometimes brought over to us among the red, but it is the last that is generally met with in our Shops. This is a heavy and juicy Root, of a roundish, or more frequently a somewhat oval Figure, with a number of Fibres growing from the Base, and the Appearance of some Leaves from the Top: It is not a solid and uniformly fleshy Root, but is composed of a number of thick Coats or Skins like an Onion; these are whitish in the internal Part, and reddish toward the Surface, where they grow thin and dry; the whole Root is so soft that it is easily cut through with a Knife. It has a faint raw Smell, and an extremely acrid and nauseous Taste. In separating the Coats, and especially on breaking any of the inner ones, there is a thick and viscous whitish Juice extravasated, which is so sharp and pungent as not to be born upon the Tongue, and which on only rubbing it on the Skin in any tender Part, raises Pimples with a very troublesome Itching.

Squills are brought us from the Coasts of *Spain*, where they grow in vast abundance. They are to be chosen large, sound, fresh, and full of Juice, firm throughout, and not flabby in any Part. They generally begin to decay about the Head, for which Reason that Part should be first examin'd, if that is sound all the rest usually is, except it have been partially affected by Bruises.

The Plant which rises from this Root is one of the *Hexandria Monogynia* of *Linnaeus*, and one of the *Herbæ bulbosa radice præditæ* of Mr. Ray. It is described by Authors under the Name of *Scilla vulgaris*, *Scilla radice rubra*, and *Omithogalum Maritimum*. The Stalk which produces the Flowers grows to two Feet or more in Height, and there are a great number of them in a large and long Spike: They are small and white, and are succeeded by a roundish Fruit raised in three slight Ridges, so as to appear obscurely trigonal, containing a Quantity of small black Seeds in three trigonal Cells. The Leaves do not appear till after the Flowers; they are large and long, of a deep green Colour, fleshy and full of an acrid Juice. The middle Part of the Root of the Squill is only used in Medicine: The Apothecaries cut the Root perpendicularly in two, and separating the Heart and the outer Parts, they expose the others, carefully taken one from another, to dry. This is a long Operation, and they often grow mouldy during the Time.

The Squill is extremely acrid, attenuant, and dissolvent: It is apt to prove emetic in whatever Form it is given, but this may be prevented, by adding a few Grains of Cinnamon to it; it then becomes a powerful Medicine in all Obstructions of the Viscera: It promotes Urine and the Menfes, and cuts the tough Phlegm, which almost choaks People in Asthmas, and many other Disorders of the Breast. The most usual Form, in which it is prescrib'd, is that of the *Oxymell*, made of a strong Infusion of the Root in Vinegar made into a Syrup with Honey.

C H A P T E R VII.

RADIX POLYPODII,
Polypody Root.

THE *Radix Polypodii* is one of those Roots that do not descend perpendicularly into the Earth, but creep under the Surface; this indeed very frequently is in great Part upon the Surface, though sometimes bury'd an Inch or more in Depth. It is a very singularly shap'd Root, and is easily known from all the other medicinal ones at Sight: It is of an oblong but irregular Figure, of the Thickness of a large Goose-Quill, sometimes of one's little Finger: It is three, four, or more Inches in Length, and is sometimes single, but frequently branch'd, and is every where of the same, or nearly the same Thickness: Its Surface is extremely rough and irregular, usually crooked or contorted more or less, and has a number of irregular Dents and Protuberances in it. It is sometimes naked, but more usually it is cover'd with a rough fibrous Matter; from its lower Part it always sends out a great number of Fibres: Its Colour on the Surface is a dusky brown, within it is greenish; it has no very remarkable Smell, but is of a sweetish Taste when first taken into the Mouth, afterwards somewhat austere, and upon the whole very nauseous.

The Plant which rises from it is one of the *Cryptogamia* of *Linnaeus*, and one of the *Herbæ Epiphyllispermæ* of *Ray*. It is common with us on the Banks of Ditches where there are Stumps of old Trees, on Walls, and by the Sides of Woods; what grows on the Oak has been esteem'd like the Mistletoe of the same Tree, to have more Virtue than what is found in any other Place, but it is observable that very little of it is found on the Stump of that Tree; and it is somewhat strange, that the Oak, a Tree whose Juices are all of the astringent Kind, and that in a very high Degree, should be suppos'd to add to the Virtue of a purging Root by its growing over it.

The Plant grows to six, eight, or ten Inches high; it consists only of a single Leaf, several of which arise from the different Parts of the Root, and each of which is a distinct and perfect Plant; this Leaf is form'd of a small but tough Stalk, which from the Middle upwards, or for more than the upper half, becomes a middle Rib, beset on each Side with oblong and narrow *Pinnæ*, divided nearly to the Base; on the back of these are found a number of round yellowish Spots, disposed in a regular Order, which are the Congeries of the Seed-Vessels of the Plant.

Polypody Root, chemically analysed, yields first a large Quantity of a colourless Phlegm, of a faint Smell, and of an insipid Taste, but with some obscure Acidity in it; after this rises a more acid Phlegm, then a colour'd Liquor of an empyreumatic Smell, and austere Taste; and after this a small Portion of a reddish Liquor, with a strongly empyreumatic Flavour, and with a Taste of a volatile Alkali in it; after this comes over a moderately large Quantity of an Oil, somewhat thick and of a brown Colour, and strongly empyreumatic Smell. The Remainder in the Retort is a light black Coal, which, calcin'd and lixiviated, yields a small Quantity of a fix'd Salt, but that not of the alkaline, but merely of the *Sal Salus* Kind.

Polypody has been at all Times celebrated for its Virtues in Medicine: It stands in the rank of purging Roots, but its cathartic Virtue is so small, that it is not to be given alone in this Intention, though join'd with other Purges it is not without its Use. It is attenuating and dissolvent, and has been found of great Service in Obstructions of the Viscera. It is given in purging Diet-drinks, in scorbutic, and in hypochondriac Cases with Success; it is also an Ingredient in the Lenitive Electuary, and in several other of the officinal Compositions.

CHAPTER VIII.

RADIX FILICIS,

Fern Root.

THIS is a Root of a very singular Figure, and easily distinguish'd by it at Sight, from all the other Roots used in Medicine. It is of an irregular Shape, often as thick as a Child's Wrist, or more, though sometimes much smaller; and of eight, ten, or twelve Inches in Length. Its Surface is extremely irregular from the great numbers of Protuberances it thrusts out: It is sometimes single, but more frequently branch'd, and sends out from different Parts a great Quantity of Fibres. It is of a lax Texture, brittle, and not very heavy: Its Colour on the Surface is a dark dusky brown or blackish, within it is whitish; it has a raw and peculiarly disagreeable Smell, though not a very strong one, and is of a sweetish Taste when first taken into the Mouth, but afterwards bitterish and austere, on the whole very disagreeable.

The Plant which rises from this is one of the *Cryptogamia* of *Linnaeus*, and one of the *Herbæ Epiphyllispermæ* of *Ray*. It is described by all the botanical Writers under the Name of *Filix mas vulgaris*, and *Filix non ramosa dentata*. It is common on the Stumps of Trees in Woods, and on the Banks of Ditches with us: The Leaves at their first appearing are roll'd up in a remarkable manner, and make a kind of spiral Button at the Top of a thick and downy Stalk, of five or six Inches long; they afterwards expand, and are form'd of a number of small Pinnules dentated on the Edges, and set close by one another on slender Ribs, the whole making a large and very handsome compound Leaf; on the back of these Pinnules are produced the Seeds, they are small and extremely numerous.

The Root of the Male Fern, chemically analysed, yields first a moderate Quantity of a limpid and colourless Phlegm, of scarce any Smell, and only a very obscure and faintly acid Taste; after this rises a Liquor at first colourless, and more strongly acid than the former, and towards the last Running colour'd of a brownish Hue, and in Taste very austere; after this comes over a small Quantity of an empyreumatic brownish Liquor, of an austere and somewhat acid Taste, and highly sated with a volatile alkaline Salt; after this a little Oil of a brownish Colour comes over. The Remainder, in the Retort, is a light black Coal, which, when calcin'd and lixiviated, yields a very small Portion of fix'd Salt, not more than fifteen Grains from the Pound, and that not of an alkaline Kind, but a mere *Sal Salsus*.

The Antients used the Root, and the whole Plant in Decoctions and Diet-drinks, in chronic Disorders of all Kinds arising from Obstructions of the Viscera, particularly in hypochondriac Cases, and in Obstructions of the Spleen and *Pancreas*. There are not wanting, among the Moderns, Authors who give it as high a Character as the Antients have done in these Cases, but 'tis an ill tasted Medicine, and is much disused at present in the Shops. The Country People esteem it a sovereign Remedy for that troublesome Distemper the Rickets in Children, and they give it also in Powder, after drying it in an Oven, to destroy Worms.

There are two other Plants of the Fern Kind, celebrated also for their Virtues by medical Writers; these are the common Female Fern, the *Filix fœmina*, and the *Osmunda regalis* or Osmund Royal. These however possess no other Virtues than those of the former, and these in a less Degree, as is plain from an Analysis of them, so that this is the Kind that ought to retain its Place in the Shops.

CHAPTER IX.

RADIX SCROPHULARIÆ,

Figwort Root.

THE *Scrophularia* Root is of a very singular Figure, and is easily distinguish'd by it at Sight from all the other medicinal Roots. It is of the number of those that creep under the Surface of the Ground; it is usually of the Thickness of a Man's Finger, or more, of an oblong Figure, nearly as thick at one End as the other, and full of Protuberances on the Surface, resembling a kind of little Kernels; these stand sometimes single, sometimes four or five together, and between them there are a great number of Fibres produced, which strike deep into the Ground.

The Root itself is fleshy, and full of Juice, of a compact Texture, moderately heavy, and of a whitish Colour on the outside, and of a pure white within: It has no great Smell, but its Taste is somewhat acrid and disagreeable.

The Plant which rises from it is one of the *Didynamia Angiospermia* of *Linnaeus*, and one of the *Herbæ flore monopetalo vasculiferae* of Mr. Ray. It is common under shady Hedges, and in Woods, and is describ'd by all the botanical Writers under the Name of *Scrophularia major*, and *Scrophularia vulgaris major*. It grows to three or four Feet high: The Stalk is square and hollow: The Leaves stand in Pairs, and are indented on the Edges, broad at the Base, and narrow at the Point: The Flowers are small, and of a dusky purple Colour.

The *Scrophularia* Root, chemically analysed, yields first a colourless Phlegm, of a saline Taste but very faint, and with that of a latent Acidity; after this comes over another Liquor, colourless at first and more strongly acid, afterwards a little brownish and austere; after this comes over a small Quantity of a reddish Liquor, containing some Portion of a volatile alkaline Salt, and with it some Remains of the Acid; lastly a thick Oil in small Quantity, and of a brown Colour. The Remainder in the Retort, calcin'd and lixiviated, yields a small Portion of an alkaline Salt.

It is esteem'd externally as a Remedy for the Piles, and for King's-Evil Sores. It is generally made into an Ointment for these Purposes, but some give it also internally in Diet-drinks.

CHAPTER X.

RADIX NYMPHÆÆ ALBÆ,
White Water Lily Root.

THIS is one of the largest Roots that come into the Shops. It is of the number of those that run horizontally, not that pierce down strait into the Ground: It grows to three or four Feet in Length, and to the Thickness of a Man's Leg, or more: The Surface is very rough and uneven, full of Protuberances or Knots, and of Depressions in Form of Holes or Cuts: It is of a very lax and spongy Texture, and sends out a vast number of thick and large Fibres. It is but light, and not very hard, though somewhat tough; it cuts easily, and is of a dark Colour without, and white and spongy within; it is of a faint Smell, and of a somewhat acrid Taste.

The Plant which rises from it is one of the *Polyandria Monagynia* of *Linnaeus*, and one of the *Herbæ Pentapetaloides vasculiferae* of *Mr. Ray*. It is described by all the botanical Writers under the Name of *Nymphaea Alba*, and *Nymphaea Alba major*, and is common in our Rivers, and other large Waters. The Leaves are single, and stand on extremely long Pedicles; they are of a roundish Figure, and very glossy Surface; they are thick and spongy, and lye flat on the Surface of the Water.

The Flowers also stand on separate Pedicles, one on each; these, like those of the Leaves, are very long, thick, and full of a spongy Substance: The Flower is large and beautiful, compos'd of a number of white Petals, with a Cluster of yellow *Apices* on their *Stamina* in the Middle. It is succeeded by a large Seed-Vessel, green and of a roundish Figure. It flowers in *July* and *August*.

The Root of the *Nymphaea*, chemically analysed, yields first an insipid Phlegm of an herbaceous Smell; after this a large Quantity of a colourless Phlegm, of a subacid, and somewhat austere Taste; then a reddish and empyreumatic Liquor, of more strongly acid Taste; and after this a Liquor still reddish, and of an urinous and alkaline Taste; and finally a brown Oil in considerable Quantity.

The Remainder in the Retort is a light black Coal, from which, by Calcination and Lixiviation, may be drawn a moderate Portion of a fix'd alkaline Salt. The Antients were well acquainted with the Virtues of this Root. *Theophrastus* recommends it externally, as a Styptic to stop the bleeding of Wounds; and others, of the old Writers, give it great Praises as an Astringent for internal Use. At present it is not much known in the Shops, but the common People use it internally for the *Fluor Albus* in Women, and for Gleets and seminal Weaknesses in Men.

CHAPTER XI.

RADIX LILII ALBI,
White Lily Root.

THE white Lily Root is moderately large and of a roundish Figure: It grows to the Size of a Child's Fist, and is, though of a Figure approaching to globular, yet somewhat flattened at the Bottom, protuberant at the Sides, and smaller toward the Top than in any other Part. Its Surface is very uneven, for it is not of one solid Mass or uniform Substance as some of the round Roots, nor composed of Coats compleatly covering one another, as others, but of a Multitude of small Scales of an oblong, somewhat broad, and pointed Figure, and of a thick and fleshy Texture; these are affixed together at the Base, and laid so regularly Side by Side, and over one another, that together they form the regular Figure already mentioned. The Root has a Number of large Fibres growing from its Base; it is considerably heavy, very succulent, and its Juice is of the thick mucilaginous Kind: It is so soft that it is easily cut through with a Knife. Its Colour is white both on the Surface and within, and it has a faint Smell and a mucous vapid Taste.

The Lily is one of the *Polyandria Monogynia* of *Linnaeus*, and one of the *Herbæ bulbosæ* of *Ray*. The Species whose Root is used in Medicine is the common white flowered Kind, well known in our Gardens, and described by all the botanical Writers under the Names of *Lilium candidum*, and *Lilium album flore erecto*. The Stalk grows to three or four Feet high; the Leaves are long and narrow, and the Flowers large, white, and very fragrant. The Seed-Vessel is large, and of a trigonal Figure, and contains a great Number of marginated reddish Seeds, lying in double Rows in three Cells. It is a Native of *Syria*, and there grows abundantly in the Sand, and by the Sides of Hills.

The Roots of the white Lily, chemically analysed, yield a large Quantity of Phlegm, the first Runnings of which have neither Taste nor Smell; but what follow are saltish, then empyreumatic, subacid, and finally urinous and of the alkaline Kind; after these some alkaline volatile Salt concretes in a solid Form, and some thick brown and ill scented Oil. The Remainder, calcined and lixiviated, yields a small Portion of a fixed alkaline Salt.

The Roots of the white Lily are principally used externally; they are emollient, maturating and suppurative, and that in no small Degree; and therefore are made Ingredients in Cataplasms intended for these Purposes with Success. The common Way of using them is boiled and bruised, but some prefer the roasting them till tender, and then beating them to a Paste with Oil, in which Form some say they are excellent against Burns. *Gerard* gives us an Account of their being given internally in Dropsies with great Success; he says that Loaves were made of common Barley Flower, and the Juice of this Root, which were baked in the common Way, and that the Patient eat them and no other Bread; and that in a Month or six Weeks the Cure was completed without the Use of any other Means.

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The Flowers of the white Lily are esteemed also emollient and anodyne; They are used externally only, and that either in Form of a Cataplasm or of an Oil by Infolation. This is often mixed in Cataplasms, or the Limb is first thoroughly anointed with it, and a common Cataplasm is afterwards applied. In the making this Oil the Flowers should never remain more than three Days in it; fresh ones should then be put in, and the same repeated a third Time: the Oil will then have the fine perfumed Smell of the Lily. But if any of the Parcels of Flowers be left longer in the Oil than this Period, their aqueous Humour gets out and fouls the Oil, and it will never after have a good Smell.

CHAPTER XII.

RADIX POLYGONATI,
Solomon's Seal Root.

THE *Radix Polygonati* is a moderately large Root, of an irregular and oblong Form: It is not of the Number of those that go strait down into the Earth, and are largest at the Head, and grow gradually smaller all the Way down: It is throughout its whole Length much of the same Thickness, and in its natural Situation it runs horizontally under the Surface, and sends up new Stalks at the Distance of two, three, or more Inches. It is usually, when well grown, as thick as a Man's Finger, and we have it in Pieces of four, five, or more Inches long; its Surface is very irregular and rugged; it has odd Protuberances in several Parts, and in others a Sort of flat Depressions, resembling the stamping of a Seal, from whence it had its Name. It is of a moderately compact Texture, very fleshy and full of Juice, and that of a thick mucilaginous Kind. It is considerably heavy, somewhat tough, but easily cut through with a Knife; its Colour is white on the outside and within, and its Smell faintish; its Taste is mucilaginous and sweetish, but somewhat acrid withal, and bitterish afterwards.

The Plant which produces it is one of the *Hexandria Monogynia* of *Linnaeus*, and one of the *Herbæ bacciferae* of Mr. *Ray*. It is described by all the botanical Writers under the Name of *Polygonatum vulgare Sigillum Solomonis*, and *Polygonatum latifolium vulgare*. The Stalks are round, and grow to about two Feet in Height; the Leaves are oblong, broad, and ribbed like those of Plantain. They stand on one Side of the Stalk, on the other Side there stands a Row of Flowers, which are small, white, and shaped somewhat like those of the Lily of the Valley. These are succeeded by round Berries, green at first, and afterwards of a blueish black; they are of the Size of Ivy-Berries, and of a sweetish Taste.

The *Radix Polygonati*, chemically analysed, yields first a limpid Phlegm of the Smell and Taste of the Root; this is but in small Quantity; after this comes over a very large Portion of a Phlegm still limpid, but of a somewhat saline Taste, and toward the End austere and subacid; after this a brown, empyreumatic and acid Phlegm in small Quantity; then a little of a still brown and empyreumatic Phlegm, containing a volatile alkaline Salt; and finally a thick black Oil of an ill Smell, and a very small Portion of concreted Salt on the

the Top of the Receiver. The Remainder in the Retort, burnt in an open Fire and lixiviated, yields a small Portion of a fixed alkaline Salt.

The Root of Solomon's Seal is a Vulnerary of the very first Rank: It is famous in Bruises for taking away the Marks, and for healing up fresh Wounds; in both Cases it is applied in Form of a Pultice bruised in a Mortar without any Addition. It has also been greatly celebrated for the Cure of Hernias, and for the assisting in forming a *Callus* in broken Bones. The Ancients were well acquainted with its Virtues on this Occasion; but they only used it externally, declaring the internal Use dangerous. Our country People however have ventured to take it internally in Case of Bruises from Blows, or any other Hurt; and they find it, as they say, very efficacious, much more so than when applied externally; at least we are assured by this, that there is no Danger in the internal Use of it as had been supposed.

CHAPTER XIII.

RADIX SYMPHYTI,

Comfry Root.

THE *Radix Symphyti* is a long and branched Root. It is frequently of three Quarters of an Inch in Thickness, and of eight, ten, or twelve Inches in Length. It is of a rounded Form, and tapers so little from the Top till it comes near the End, that it usually resembles in the Pieces we see it in, from which the small Ends are broken off, a long Segment of a Cylinder. Its Surface is tolerably smooth, its Texture loose and somewhat spongy; it is not tough as many other Roots, but easily breaks transversely. It is considerably heavy, but so soft and fleshy, that it is easily cut through with a Knife. Its Colour on the outside is a deep black; within it is perfectly white as Snow when first cut: but it soon contracts a Yellowness or Brownness on being exposed to the Air. It abounds with a viscid and glutinous Juice, which makes it adhere to the Fingers whenever it is newly cut. It has very little Smell, and only a mucilaginous vapid Taste.

The Plant to which it belongs is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Herbæ asperifoliæ* of Mr. Ray. It is common with us by Ditch Sides and in other wet Places, and is described by the botanical Writers under the Name of *Symphytum vulgare*, *Symphytum majus*, and *Consolida major*. It grows to two Feet or more in Height; its Stalks are hollow, rough, and alated or edged with Membranes. Its Leaves are very large, they are oblong, pointed at the End, and of a dusky green, and are like the Stalk, very rough to the Touch. The Flowers stand in a Row on the Tops of the Stalks; they are not very large, and are white or purplish; they are succeeded by black Seeds lodged in their Cups.

A Pound of fresh Comfry Root, distilled in a Retort, yields two Ounces of a limpid Phlegm of an herbaceous Smell, and of an obscurely saline Taste; then between six and seven Ounces of an acid Phlegm; and after this about the same Quantity of a limpid, but reddish, and somewhat empyreumatic Liquor, of an austere and acid Taste; and finally about five Drams of a reddish very empyreumatic Liquor, of a subacid and very acid Taste, which yet contains

contains also a small Portion of a volatile and urinous Alkali with it, and about eight Grains of a very thick Oil. The Remainder in the Retort is not more than ten Drams; and this calcined in an open Fire, yields by Lixiviation a little more than a Dram of a fixed alkaline Salt.

The viscid Juice in Comfrey Root is thicker than that in the Marshmallow, which however it resembles otherwise in many Particulars. It is a noble Balsamic and Agglutinant. It is given in Diarrhoeas from sharp Humours, and in Dysenteries and Spittings of Blood with great Success. It obtunds the Acrimony of Humours, and lines the Parts with a new *Mucus*, when the natural one has been abraded by them. It is also a famous Vulnerary, both internally and externally. Some prescribe it dried and powdered; but it loses much of its Virtue this Way. It is much better given in Decoction or Syrup; if in the former Way, the Decoction must not be too strong, since Mucilages of this heavy Kind are apt to be offensive to the Stomach. It is good against *Profluvia* of the Menfes and the *Fluor albus*, and is also excellent in many Disorders of the Kidneys and Bladder.

CHAPTER XIV.

RADIX LAPATHI, *Dack Root.*

THE *Radix Lapatii*, or as it is more distinctly and expressively called, *Radix Oxylapatii*, is a long and moderately large Root; it grows frequently to the Thickness of a Man's Thumb, and to eight, ten, or more Inches in Length before it divides. It is thickest at the Top and gradually grows thinner toward the Bottom, where it divides into many Branches, and is furnished with a great Quantity of Fibres. Its Surface is tolerably smooth; its Texture dense and compact: It is considerably heavy and very tough, so that it is scarce possible to break it transversely; but it splits longitudinally with great Ease and Regularity. Its Colour on the outside is a bright and strong brown with some Cast of Reddishness in it; within it is yellowish. It has a raw and not very agreeable Smell, though not a strong one, and an austere and somewhat acrid Taste.

The Plant which affords it is one of the *Hexandria Trigynia* of *Linnaeus*, and of the *Herbæ flore imperfecto sive stamineo* of Mr. Ray. It is described by the botanical Writers under the Name of *Lapathum acutum*, *Oxylapathum*, *Lapathum folio acuto plano*, and *Lapathum acutum majus*. The Leaves that rise from the Root are large and long; they are broadest at the Base, and from thence gradually become narrower, till they come to a Point at the End. The Stalks rise to four or five Feet high, and are striated, knotted, and often bent. The Leaves on these are of the same Figure with those from the Root only smaller. The Flowers grow in round Clusters at little Distances all along the Tops of the Stalks, and are like those of the other Docks but smaller. The Seeds also are smaller, and the outer Leaf of the Cup which serves as a Seed-Vessel, rises on its Bark into a large prominent Tubercle of a red Colour.

This is the true *Lapathum acutum*, whose Root ought to be used in Medicine. It is a Native of our own Country, but is much less common than many

ny of the other Ducks, and is therefore liable to be sophisticated in the Shops and Markets with the Roots of one or other of those. The Roots commonly offered to Sale in its Place are usually those of the *Lapathum folio obtuso* or common Dock, and of the *Lapathum folio acuto crispo*. These are both so like those of the true *Oxylapathum*, that it would be hard to give Characters certain enough to distinguish them by. But it may always be done with the utmost Certainty by means of the Leaves, and they should for that Reason be never purchased without the Leaves on them.

The *Oxylapathum* Root, chemically analysed, yields a large Portion of a limpid Liquor of the Smell of the Root, and of a saline and subacid Taste; then a larger Quantity of a Liquor less saline, but more acid, and at the last Runnings very austere; after this a small Portion of a reddish Liquor with somewhat of the acid Taste, but evidently impregnated also with a volatile urinous Salt; and finally a Portion not inconsiderable of a thick Oil like Butter. The Remainder in the Retort, calcined and lixiviated, yields a small Quantity of a merely alkaline Salt.

The *Oxylapathum* Root is chiefly used externally for the Itch and other cutaneous Foulnesses made into an Ointment with Lard. Internally it proves an Aperient and Attenuant; but it has also an after Astringency which renders it very valuable, as it, after dislodging the viscid Humours that occasioned Obstructions, restores the Tone of the Parts.

It is an excellent Ingredient also in Diet Drinks, and Decoctions intended against the Scurvy and all Diseases of the Skin.

C H A P T E R XV.

RADIX BARDANÆ, *Burdock Root.*

THE *Radix Bardanæ* is one of the long Roots: It grows to the Length of a Foot or more, and to the Thickness of a Man's Thumb. It is largest at the Top, and very gradually grows smaller to the Bottom Part, where it usually divides into two or three Branches: Its Surface is tolerably smooth and even; its Colour a dusky brown, almost black on the Surface, and a pure white within. Its Texture is moderately compact. It is considerably heavy and very tough; but it splits easily, or cuts without Difficulty with a Knife. It is full of a soft and somewhat mucilaginous Juice, and has scarce any Smell; but in Taste is at first sweetish, and afterwards somewhat austere.

The Plant which produces it is one of the *Syngenesia Polygamia æqualis* of *Linneus*, and one of the *Herbæ flore composito capitatae* of *Ray*. It is the common Burdock frequent by all our Way Sides, and is described by Authors under the Names of *Personata*, *Bardana*, *Lappa Major*, and *Arcium*. The Leaves are a Foot or more in Length, and not much less in Breadth; they stand on long Pedicles, and are broad at the Base, and pointed at the End. The Stalks are tough, thick, and woody. They rise to two, three, or more Feet in Height. The Heads are sufficiently known by the Trouble they give in sticking to the Cloaths of People who go by them.

The Root, chemically analysed, yields first a large Portion of a limpid Phlegm, of an herbaceous Smell and Taste, and somewhat obscurely acid; after this a larger Quantity, not less than half its Weight, of a Phlegm at first limpid and colourless, and strongly acid, but toward the End austere and reddish; after this comes a small Portion of a Liquor partly acid, partly alkaline, and of a saline Taste with both; after all a small Portion of a thin Oil, of a brown Colour and ill Smell. The Remainder in the Retort, from a Pound of the Root put in, does not weigh above seven Drams. This calcined in an open Fire and lixiviated, yields near a Dram of a fixed alkaline Salt.

The Root of the *Bardana* seems to want nothing but to be less common, to make it very famous in Medicine. It is allowed by Authors of the greatest Credit to be a powerful Diuretic, Sudorific, and Uterine. It is also by many rated very high as a Pectoral and Febrifuge. A Decoction of it is recommended in malignant Fevers, and in the Small Pox: We are not without Instances of venereal Diseases cured solely by the Use of it; one of them no less than in a crowned Head. *Henry* the third of *France* is recorded to have been thus cured, and the Case at large is related by *Riverius*. *Cæsalpinus* greatly commends it in Diseases of the Breast and Lungs, in Spittings of purulent Matter, and in Empyemas arising from Pleurifies. A Decoction of the Root is a safe and excellent Diuretic, and in Cases of Gravel gives Relief sooner than almost any Simple we know.

The Seed is also a very powerful Diuretic, given in Powder from a Scruple to two Scruples for a Dose; and the Leaves as well as the Roots are an Ingredient in several of the old Compositions.

CHAPTER XVI.

RADIX PETASITIDIS, *Butterburr Root.*

THE *Radix Petasitidis* is a long and moderately large Root; and is of the Number of those which creep under the Surface of the Earth, and do not penetrate down into it. It is therefore not of the tapering Figure of the common long Roots, but throughout of much the same Thickness. The whole Root usually consists of a Number of long and thick Branches proceeding from one general Head, and spreading every Way. These are often of the Thickness of a Man's Thumb; they sometimes divide into other Branches, at different Distances; and sometimes continue entire throughout their whole Course, only sending off a Number of Fibres. These Branches are of a rounded Figure, and of a rough, uneven Surface. They are of a lax Texture, but moderately heavy, somewhat tough, and of a dusky brown Colour on the outside, but white within. They are soft and easily cut through with a Knife, and are very apt to be worm-eaten. They are of a strong, but rather aromatic and fragrant, than disagreeable Smell, and of an acrid, aromatic, and bitterish Taste.

The Plant which produces them is one of the *Syngenesia Polygamia superflua* of *Linnaeus*, and one of the *Herbæ flore composito Semine papposo* of *Ray*. It is common by the Sides of Rivers, and in other watery Places with us, and is described by the botanical Writers under the Name of *Petasites*, and *Petasi-*

tes vulgaris major. The Flowers appear in *April*; the Leaves not till some time after. The Stalks, which bear the Flowers are about a Foot high; they are very thick and fleshy, but brittle and very tender. They are surrounded with a sort of thin oblong Membranes in the Place of Leaves. The Flowers grow in a thick Spike at the Top, and are very small, and of a purplish Colour. The Leaves are very large and of a roundish Figure. They stand on long and juicy Pedicles, somewhat hollowed on one Side, and rounded on the other.

The Roots of the *Petasites*, chemically analysed, yield first a colourless Phlegm of the Smell of the Plant, and in its last Runnings of a somewhat saline Taste; after this comes over a very large Portion, not less than seven or eight Ounces, from a Pound of the Root, of a Phlegm of a subacid, and toward the last, of a more strongly acid and austere Taste, but still with somewhat of the saline strongly in it; after this comes a small Quantity of a brownish and empyreumatic Liquor, of a strongly alkaline and urinous Taste, but still with some Acidity; and after this a large Portion of a yellowish brown Oil. The Remainder in the Retort, calcined and lixiviated, yields a moderate Portion of a fixed alkaline Salt.

Butterburr Root has at all times been famous in malignant and pestilential Fevers. The *Germans* are so fond of it on these Occasions, that they have named it Pestilence Wort; and it has with us been made the Basis of many cordial Waters and other Preparations intended against Contagion. It is certainly a very powerful Sudorific. It promotes also Urine and the Menfes, and is by many greatly recommended in Asthmas, Coughs, and Difficulty of breathing. It is given also as an Astringent in the *Fluor albus*, and in old Gleet. The general Way of prescribing it is in Decoction. The Country People use it against Worms, and apply it externally to Ulcers, which they say it cleanses and heals.

CHAPTER XVII.

ALLIUM, *Garlic.*

THE *Radix Allii* is of the Number of those Roots which are always to be used fresh and full of Juice, not dried. It is a Kind of compound Root, formed of many smaller single ones wrapped up in the same common Membranes. When well grown it is usually about an Inch and half in Diameter, often considerably more. Its Figure approaches to round, but somewhat irregularly, and it is considerably heavy. It is covered with a Number of very thin and fine Membranes of a whitish Colour, usually with some Tendency to Purple. The several smaller Roots, of which the general one is composed, and which are called by us Cloves of Garlic, are of an oblong and irregular Figure, but always smallest at the Top. They do not adhere to one another, but are only placed close Side by Side. These are moderately heavy, very juicy, easily cut, and of the same whitish Colour. They are of an extremely strong, and to most People a disagreeable Smell, and of an acrid and pungent Taste. Garlic is to be chosen fresh and sound, such as feels plump, firm, not flabby, and such as is full of Juice.

The Plant which affords it is one of the *Hexandria Monogynia* of *Linnaeus*, and one of the *Herbæ radice bulbosa præditæ* of *Ray*. It is not a Native of *England*, but is kept in our Gardens, and is described by all the botanical Writers under the Name of *Allium*, *Allium Vulgare*, and *Allium Sativum*. Its Leaves are oblong and narrow, but they are not hollow like those of the Onion Kind, but grassy: The Stalk is tall, round, smooth, and hollow: The Head of Flowers is at first cover'd with a thin Membrane, which terminates at the Top in a Point, this bursts when they are ready to open, and they are finally succeeded by large fleshy Capsules, containing round Seeds in three separate Cells.

Five Pounds of the clean Roots of Garlick, chemically analysed, yield about half their Weight of a limpid Phlegm, smelling and tasting strongly of Garlick: The first Runnings of this are of a saltish Taste, and slightly acid; the last are less salt, and more strongly acid: After this comes a Pound and five Ounces of a Liquor still limpid, but very acid and somewhat austere, especially towards the last; then a little more than four Ounces of a reddish limpid Liquor, partly acid and partly urinous in its Taste, and evidently loaded with a volatile Salt of the urinous Kind; finally, there rise about two Ounces of a thick Oil, of the Consistence of an Extract, and a few Grains, about ten or twelve, of a volatile Salt in a concreted Form, and of the urinous Kind. The Remainder in the Retort is a black Mass like a Coal, of about three quarters of a Pound Weight; this by Calcination in an open Fire will be reduced to little more than an Ounce; and from this, by Lixivation, may be obtained very near half its Weight of a fix'd Salt, but that not of the alkaline, but of the *Sal Salsus* Kind.

Garlick is an extremely active and penetrating Medicine, its Smell and Taste denote this sufficiently, but it is no Way so evidently proved as by the applying Plaisters of bruised Garlick to the Soles of the Feet, which will in a very little Time give a strong Smell to the Breath. Issues will Smell strongly of Garlick three or four Hours after a Person has eaten it: And given to Fowls it communicates its Taste strongly to their Flesh, and even in some Degree to their Eggs.

Bruised and laid on any tender Part of the Skin, it corrodes it and raises Blisters. Some People are very fond of it in Food, and a little of it is not only agreeable this Way, but assists Digestion and strengthens the Stomach.

It is esteem'd by some the greatest of all Alexipharmics. People talk of having cured pestilential Distempers with Garlick alone, and many affirm it impossible to receive Infection while the Person has Garlick about him. The *German* Physicians frequently carry a Clove of Garlick in their Mouths, when they visit Patients in malignant Fevers. *Galen* calls it the *Theriaca Rusticorum*, and *Platerus* recommends a strong Decoction of it in the Plague, assuring us that it promotes Sweat and Urine, and often cures. We learn from *Bokelius*, that the *Hungarians* use it as their great Remedy in Times of pestilential Contagion. With us it is more in Use among the Country People, who prescribe for themselves, than in the Shops; they give a Decoction of Garlick in Milk as a Remedy for Worms, and also in the Cholic, and in Suppressions of Urine. A slight Infusion of Garlick in hot Water, is indeed recommended by many against Cholics, and is often used with great Success. Its most constant Use

with

with us however is in Asthmas, and catarrhus Disorders of the Breast, in which it promotes Expectoration, and eases the Difficulty of Breathing. Our Dr. *Bowles* declared it the greatest of all Medicines in a moist Asthma, his Way of giving it was this: He boil'd the Cloves of Garlick in fair Water till they were very tender, then he took them out, wiped them dry, and laying them at the Bottom of a Jar, pour'd over them a Syrup, made by adding equal Parts of Vinegar to the Decoction or Liquor the Roots had been boil'd in, and as much fine Sugar as was necessary to give it a Consistence. One, two, or three of the Cloves were to be swallow'd every Morning, with a Spoonful or two of the Syrup.

Whatever may be the Virtues of Garlick, People of Prudence will however be cautious of a too free Use of it. The Dose ought to be small, and if long continued it is apt to heat and inflame the Viscera. It often has been observ'd to occasion Flatulencies, to bring on Pains of the Head, and to hurt the Sight. *Fallopian* condemns its Use in People who have any venereal Complaints, and others declare against it for People subject to the hæmorrhoidal Discharges. *Spi-gelius* affirms, that the Juice of Garlick swallow'd in any large Doses is fatal; and *Diemenbroek* declares against it, even in the Plague.

Such are the Opinions of Authors in Regard to this Root: Upon the whole it may be observed, that there is no Medicine capable of doing good, but it may also, improperly administr'd, do harm; and that the more, as it is able to do the more good. The knowing what to give in a Disease, is less than the knowing how to give it; and no Medicines are so much qualified to do Mischief, in unskilful Hands, as the best. The good Effects of Garlick in Affections of the Breast are evident, it only is to be wish'd, that a prudent Person may always direct its Use.

CHAPTER XVIII.

BRYONIA ALBA,

White Bryony.

TH E White Bryony Root is one of the largest Roots we are acquainted with. It is of an oblong Shape, and is frequently met with of the Thickness of a Man's Arm, sometimes of twice or three times that Bigness. These large Roots are often two Feet or more in Length, but usually they are shorter. The Root is of a rounded Shape, and goes down, often the greatest Part of its Length, without any great diminishing in Thickness, so as to seem a long Segment of a Cylinder; sometimes it tapers more considerably. It is usually divided into two or more Parts at the Bottom, and furnish'd with a number of Fibres: Its Surface is tolerably smooth, but mark'd a little with Furrows, principally of the annular Kind: Its Texture is somewhat lax and spongy: It is however considerably heavy, but so soft that the thickest Pieces are easily cut through with one Stroke of a Knife: It is very juicy, and is externally of a brownish or yellowish white Colour, and of a pure white within: It is of a disagreeable Smell, and an acrid and nauseous Taste; when dry'd it powders easily; the Powder is farinaceous, and has very little of the Virtue of the fresh Root: When cut transversely it is seen to be beautifully radiated, and form'd

form'd of concentric Circles, but these are more distinctly visible in the dry Root than in the fresh.

The Plant which affords this Root is one of the *Monæcia Syngenesia* of *Linnaeus*, and one of the *Herbæ bacciferae* of Mr. Ray. It is common under our Hedges, climbing among the Bushes to a great Height; and is described by the botanical Writers under the Name of *Bryonia Alba*, *Vitis Alba*, *Uva Serpentina*, *Tamarum* and *Cerasiola*. Its Stalks, though often ten or twelve Feet long, are very slender, and incapable of supporting themselves; they twist about every thing that is in their Way, and have certain little Tendrils, by means of which they also lay hold of the Bushes. The Leaves are very large, and somewhat resemble those of the Vine, but they are very rough to the Touch, and of a paler Colour. The Flowers are small and greenish; the Fruit is a little red Berry, of the Bigness of a small Pea, soft, and full of a very nauseous Juice; containing also within that some roundish Seeds.

A Pound of fresh Root of white Bryony, distill'd in a *Balneum Mariæ*, yields about half its Weight of a clear Phlegm, of a slightly saline Taste, and of an herbaceous Smell; after this about two Ounces and a half of a still limpid Phlegm, of an obscurely acid Taste. The Remainder, put into a Retort, yields first about half an Ounce of an acid and austere Phlegm, then about five Drams of an empyreumatic brown Liquor, containing some Portion of a volatile urinous Salt, and more than half a Dram of the same kind of Salt in a concreted Form, and about five Drams of a fluid Oil. The Remainder in the Retort, calcined and lixiviated, yields about two Drams of a fix'd Salt, of the alkaline Kind.

The express'd Juice of the Root is of a bitter, acrid, and nauseous Taste, and gives some Tokens of its containing an Acid. It is an Attenuant, and Resolvent: It powerfully dissolves viscid Humors, and carries them off by Stool, and sometimes by Vomit, but it is a rough Medicine, and must be given with great Caution; when dry'd it becomes much more gentle in its Operation, purging only downward. It is given with Success in Dropsies, Asthmas, hysteric Complaints, and even in Palsies and Epilepsies; it is much the more powerful in all these Intentions when fresh, but it should be corrected with an Addition of Cream of Tartar, Vinegar, or some of the Aromatics.

The fresh express'd Juice is a violent Purge, and often a Vomit also, and is in Use among the Country People: And we have Accounts from very good Authorities, of even Epilepsies cured, so as never to return, by repeated Doses of this Juice in otherwise good Constitutions. *Sydenham* recommends it in maniac Cases; and *Matthiolum* says much in Praise of its express'd Juice, or its Infusion in Wine, in hysteric Complaints. We have a Preparation of this Root, under the Name of *Bryoniae fæcula*, order'd to be kept in the Shops: It is made by expressing the Juice from the Root, and suffering it to settle; the Liquor is to be thrown away, and the white farinaceous Substance that had subsided is to be saved for Use; but this, by that Time it is dry'd, is like the *Fæcula* of *Arum*, and has lost almost all the Virtues of the Root.

Bryony Root externally apply'd in Form of a Cataplasm is powerfully resolvent and discutient: Apply'd to the Region of the Kidneys it proves diuretic; and it is famous in many Places for the Cure even of scrophulous Tumors. It is however like many other of the Medicines of our own Produce, better known

known to the Country People than to the Physicians, in any of these Intentions.
It is an Ingredient in the hysteric Water, and in some other Compositions.

PARTS of VEGETABLES

Used in MEDICINE.

CLASS the EIGHTH.

BARKS.

THE Bodies of this Class, though of great Consequence in Medicine, are only ten: These will be arrang'd into two Divisions, as they are more or less frequently used in Medicine.

Of the first Kind are,

1. CINNAMON.
2. CASSIA LIGNEA.
3. CORTEX WINTERANUS.
4. CANELLA ALBA.
5. CORTEX PERUVIANUS.

Of the latter Kind are,

1. CASSIA CARYOPHYLLATA.
 2. CORTEX ELEUTHERII.
 3. SIMA ROUBA.
 4. CODAGA PALA.
 5. CAPERS BARK.
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BARKS

More frequently used in MEDICINE.

CHAPTER I.

CINNAMOMUM,
Cinnamon.

THE Cinnamon of our Shops is a thin and fine Bark, always brought to us in a convoluted Form, or roll'd up into a sort of little Tubules, or Pipes; these are from the Thickness of a Goose Quill, to that of a Man's Thumb,

Thumb, and sometimes more than that; and in Length they are often two or three Feet. The Bark itself is also very different in Thickness, as well as the Rolls or Tubes it forms itself into. It is sometimes of the Thickness of a Crown Piece or more, but usually of that of a Shilling: Sometimes we meet with it as thin as a Piece of Paper. Its Surface is tolerably smooth and even, but not at all glossy; its Texture fibrous, and moderately firm: It breaks however tolerably easily, and is not very heavy: Its Colour is a brownish with a Mixture of red: It is of an extremely fragrant and aromatic Smell, and of an acrid and pungent but very agreeable Taste.

Cinnamon is to be chosen in moderately large Tubules, such as are about the Thickness of a Man's Finger, the Bark itself not too thick: Such as are thicker and chop'd, and crack'd on the Surface, are seldom so good. It should be of a reddish Colour, not simply brown, and above all things of an acrid and agreeable Taste. The greatest Deceits that are practised in the Sale of Cinnamon, are the selling such as has already had its essential Oil distill'd from it, and been dry'd again, and the imposing the *Cassia Lignea* in its Place. The first of these Cheats is discover'd by the want of Pungency in the Cinnamon; the second by this, that the *Cassia*, when held a little Time in the Mouth, becomes mucilaginous, which the true Cinnamon never does. Our Cinnamon is the interior or second Bark of the Tree which produces it: The People who collect it take off the two Barks together, and immediately separating the outer one, which is rough, and has very little Fragrancy, they lay the other to dry in the Shade in an airy Place, where it rolls itself up into the Form we see it in.

The Tree which produces it is one of the *Enneandria Monogynia* of *Linnaeus*, and one of the *Arbores fructu Calyculato* of *Ray*. It is described by *Burman* in his *Thesaurus Zeylanicus* under the Name of *Cinnamomum foliis latis ovatis frugiferum*, and by *Linnaeus* in his *Hortus Cliffortiana* under that of *Laurus foliis oblongo-ovatis nitidis planis*. *Piso* calls it *Canella quæ cicurdo*, and *Breynius* *arbor Canellifera Zeylanica*. Its Root is large, and divided into many Branches, and it penetrates very deep into the Ground: Its Bark is of a reddish grey without, and red within: Its Smell is like that of Camphire, very strong, but the woody Part has no Smell at all. The Trunk is thick, and divides into a multitude of Branches: The Bark is green at first, but it grows reddish with Age, and wraps itself close to the Wood, but it is cover'd with a greyish, loose, and chap'd Rind; it is of a faintly aromatic Taste while fresh, but acquires a very pungent one in drying: The Wood is whitish, firm, and without Smell: The Leaves resemble those of the Bay Tree, but they are larger, being four Inches or thereabout in Length; they stand on moderately long Pedicles, and though of no very remarkable Smell while fresh, they become very fragrant in drying, and have the true Smell of the Cinnamon Bark, by which they are distinguish'd from the Malabathrum Leaves, which otherwise greatly resemble them. The Flowers are small and whitish, they stand in Clusters at the Ends of the Branches; and are succeeded by little Berries of an oblong Figure, green at first but afterwards bluish and spotted with white; these stand in a little hollow greenish Cup; they consist of a thin Rind, enclosing a soft greenish Pulp, of an austere, astringent, and subacid Taste; under which is an oblong, thin, and brittle Stone, containing a Kernel of the same Shape, and of a reddish Colour.

The Tree grows in *Ceylon* so plentifully, that the Woods and Forests are full of it. The Bark intended for Use is taken from the Branches of three Years Growth or thereabouts. They take it off in Spring and Autumn, when the Quantity of Sap between it and the Wood make it loose. The Branches thus stripped remain bare two or three Years, but afterwards they acquire a new Covering of the same Kind with the former. There is a thin Membrane very observable on the inner Surface of the Cinnamon when fresh taken from the Tree, and which even is distinguishable with us if carefully enquired after. This is truly a third Bark of the Tree. It is of a vastly more acrid Taste than the rest, and is almost alone what contains the Oil of the Drug. *Hoffman*, who was at the Pains of separating some of it, found, that it yielded, on Distillation, six times as much Oil of Cinnamon as the common Cinnamon taken in the gross.

The Ancients have treated very largely of a Drug which they call Cinnamon, and of another very nearly allied to it, which they call Cassia. Many have supposed their Cinnamon and Cassia to be the Produce of two different Trees; that their Cinnamon is now wholly unknown to us; and that their Cassia was the same with what we know call Cinnamon. Their Accounts of these Spices are but little to be depended upon. They only received them from Merchants, unwilling perhaps, as well as unable, to give them true Information about the Origin of a Drug of such Value. It appears upon the whole, that our Cinnamon, and their Cinnamon and Cassia are all three the same thing. Their own Accounts of their Cassia prove it to be the same with our Cinnamon; and from the same Accounts it is also easy to learn, that their Cassia and Cinnamon were the Produce of the same Tree, but that the Cinnamon was the smaller Branches cut off and sold to them Wood and Bark together, and their Cassia the Bark of the somewhat larger Branches of the same Tree, stripp'd off and sold separate. The Trade of Cinnamon seems to have been carried on a great while in this double Manner, till at Length it was found better to strip even the smaller Branches, and to bring over only the Bark, which is the Custom continued to this Day; only we have changed the Terms, and made the Word Cinnamon applicable to and expressive of the Bark, instead of the Name Cassia by which they called it. The *Greeks* distinguished what they called Cinnamon and Cassia into many Kinds: Beside their ordinary Cassia which was the Bark of the larger Branches of the Tree stripped off and rolled up into a Sort of Tube or Pipe, like our Cinnamon, which they therefore called *Cassia Syrinx* or *Cassia fistula* (a Term we now use in a very different Sense) they had some of these larger Branches cut in the Way of what they called Cinnamon, and sent to them Wood and all. This they called *Xylocassia* or *Cassia lignea*, another Term which we have also of late applied to something else. *Dioscorides* sometimes calls this *Hastus Mosylites*. They had also several other Kinds of Cassia, differing in Colour, Degree of Pungency and other Circumstances, which they called *Alyphe*, *Moto*, and *Giser*, and by other Names. Their Cinnamon they also distinguished in the same Manner, into the Mosylitic, the Mountain, the black, and the white Cinnamon; but all these are not to be supposed to have been the Barks of different Species of Cinnamon Trees; they were only different in trifling Accidents, and were no other than the Strippings of the same Species of Tree; some of the larger and others of the smaller

666 TINCTURE of CINNAMON.

smaller Branches, and some from the Trees of one Part of the *East*, and others from those of another. There is as much Difference even now between the Cinnamon of *Ceylon* and that of *Malabar* and *Java*, between that which grows in good Soils and that of bad, and between that of the cultivated and that of the wild Trees, as between the several Kinds of Cinnamon described by the *Greeks* under their several Names.

All the Virtues attributed by the Ancients to their Cinnamon are found in ours. It is an Astringent in the *Primæ Viæ*; but in the more remote Seats of Action it operates as an Aperient and Alexipharmic. It stops Diarrhœas, and it promotes the Menfes, and hastens Delivery. It strengthens the *Viscera*, assists Concoction, dispels Flatulencies, and is a very present Cardiac. It may be given in Powder from ten Grains to twenty; but it is more frequently given in Form of Decoction, Tincture, or Infusion. Beside its being an Ingredient in many of the Compositions of the Shops, it is in such Esteem as to be given in the Form of a simple and a spirituous Water, a Tincture, and an essential Oil.

AQUA CINNAMOMI SPIRITUOSA, *Strong Cinnamon Water.*

Bruise a Pound of choice Cinnamon to a gross Powder; pour on it a Gallon of Proof Spirit; let it stand in Digestion three Days, shaking it from Time to Time; then pour it into the Still, and with it a Gallon of Water. Distil off a Gallon.

AQUA CINNAMOMI SIMPLEX, *Simple Cinnamon Water.*

Bruise a Pound of fine Cinnamon to a gross Powder; put it into two Gallons of Water; let it stand twenty four Hours to infuse, and then distil off a Gallon.

TINCTURA CINNAMOMI, *Tincture of Cinnamon.*

Beat to a tolerably fine Powder an Ounce and half of fine Cinnamon; add to it a Pint of strong Spirit; let it stand a Fortnight without Heat, but often shaking the Vessel, and then strain it off for Use. This may be given from one Dram to two for a Dose.

The Oil of Cinnamon is distilled in the usual Way of essential Oils with Water, but few People have found it worth their while to make it with us: What we have is usually distilled in the *East*, and brought over for Sale in *Europe*: And the Reason is very evident; for it is found that though Cinnamon, when fresh taken from the Tree, affords a very considerable Quantity of Oil, yet when dried and kept some time, it yields less and less, and after a few Years scarce any at all. In the Distillation of this Bark there are properly two Kinds of Oil separated, the one of which swims on the Surface of the Water like most other essential Oils; but the other sinks to the Bottom. The light Kind is of a very pale yellow, the heavy one is reddish; but they are both of the same Degree of Fragrancy, and both equally acrid and pungent in the Mouth.

The Bark of the Root of the Cinnamon Tree, distilled with Water, yields a large Quantity of a fluid Oil, and also a large Quantity of a Kind of Camphire, of a very pleasant and sharp Smell like that of the common Camphire, but with a Mixture of the Cinnamon Flavour in it. This Camphire is whiter than

than the common Kind, and of a much more agreeable Smell. It is also much more volatile in its Nature: It easily flies away in the Air, and when set on Fire burns entirely away, leaving no Remainder. The Leaves of the common Cinnamon Tree, distilled in the common Way, afford also an Oil which sinks in Water, and is turbid when first made, but afterwards becomes clear and yellow; this has a mixt Smell between that of Cinnamon and Cloves. The Berries yield also an Oil which has much the Smell of the common Oil of Juniper, but with something of a mixed Flavour of Cloves and Cinnamon with it; and if boiled in Water, they afford a thick fatty Substance like our Oil of Bays, which is used in Unguents by the *Ceyloneſe*, and sometimes in Candles for their Princes.

CHAPTER II.

CASSIA LIGNEA,
Cassia Bark.

WHAT we call *Cassia Lignea* is a Bark with no proper Title to the Term *Lignea*, which has been given it only to distinguish it from another Drug of the same Name of Cassia, though of a very different Nature and Quality, which we call *Cassia fistula*. We are to be careful not to confound our Cassia with those of the ancient *Greeks*; they had indeed, as well as we, the Terms *Cassia Lignea* or *Xylocassia*, and *Cassia fistula* or *Cassia Syrinx*; but they applied them somewhat more properly. Their *Cassia Lignea* was the larger Branches of the Cinnamon Tree cut off with their Bark, and sent together to the Druggists: Their *Cassia fistula* or *Syrinx* was the same Cinnamon in the Bark only, as we now have it stripped from the Tree, and rolled up into a Kind of *fistulae* or Pipes.

Our *Cassia lignea* does not appear to have been known to them; some indeed have imagined they found its Characters among some of the several Kind of Cinnamon and Cassia they describe to us: But there is no where in their Works any Mention of its mucilaginous Nature, which is its true Characteristic, and which such accurate Observers as they would not have missed, if they had known or wanted to describe this Bark.

The *Cassia lignea* of our Shops is probably then a later Discovery. It is a Bark in its external Appearance, very much resembling Cinnamon, and even emulating it in its Smell and Taste. It is brought to us in a Sort of Tubes or Pipes, into which it naturally rolls itself up in drying. These are sometimes of the Thickness of the ordinary Tubes of Cinnamon and of the same Length; but they are usually shorter and thicker, and the Bark itself also thicker and coarser. It is of a tolerably smooth Surface, and of a brownish Colour with some Cast of the reddish in it, but much less of it than the Cinnamon has. It is of a less fibrous Texture than the Cinnamon, and more brittle, and is of an aromatic Smell and Taste, truly of the Cinnamon Kind, but the Smell weaker, and the Taste much less acrid and biting. It is distinguished from Cinnamon by this Want of Pungency, and yet more by its being of a mucilaginous or glutinous Quality, when taken into the Mouth and held there some time. There is no great Fear of Adulteration in this Drug. Cinnamon is the only Bark that

that resembles it ; and this is too dear to be sold in its Place. There is some of it more yellowish, and some more brownish ; but these Differences of Colour depend on Accidents that do not at all affect its Value. It is to be chosen in Pieces not too thick, and the best is that which approaches nearest to Cinnamon in Flavour.

The Tree which produces the *Cassia Lignea* is one of the *Enneandria Monogynia* of *Linnaeus*, one of the *Arbores bacciferae fructu calyculato* of Mr. Ray. It is indeed a different Species of the same Genus with the Cinnamon Tree, and is described in the *Hortus Malabaricus* by the Name of *Carua*, and by *Piso* under that of *Cassia vulgaris* and *Calibaca dicta*. It is separated from the Branches of this Tree in the same Manner as Cinnamon is from the Tree which produces it. They take off the two Barks together in Autumn or Spring, and separating the rough outer one, which is of no Value, they lay the inner Bark to dry, which rolls up and becomes what we call Cassia. Though there appears all the Reason in the World to suppose the old Greek Writers were unacquainted with this Kind of Cassia, the later Greeks were very well acquainted with it, and used it in Conjunction with Cinnamon in many of their *Formulae*.

It is a Stomachic and Cordial ; but it possesses these Virtues in a less Degree than Cinnamon ; but in Diarrhoeas it sometimes succeeds better than Cinnamon itself by Reason of its glutinous Nature. It is used in the Venice Treacle, Mithridate, Diascordium, and most other of the capital Compositions of the Shops ; but it is very little heard of in extemporaneous Prescription.

CHAPTER III.

CORTEX WINTERANUS, *Winter's Bark.*

THE true *Cortex Winteranus*, for we have a very different thing sometimes under its Name, is a thick and firm Bark : It comes to us rolled up in the Manner of Cinnamon, into a Kind of Tubes or Pipes ; but they are usually thicker, and always shorter than the fine Tubes of Cinnamon. It is externally of a greyish Colour, and of a reddish brown within. It is properly indeed a double Bark, the outer and inner of the same Tree, not the inner Bark alone, separated from the other as the Cinnamon and Cassia are. The outer Rind is of an uneven Surface and of a loose Texture, very brittle, and easily powdered. The inner Bark, which has the principal Virtue, is hard and of a dusky reddish brown. The outer one is often cracked and open in several Places, the inner one never in any. It is of an extremely fragrant and aromatic Smell, and of a sharp, pungent, and aromatic Taste, much hotter than Cinnamon in the Mouth, and leaving a more lasting Flavour in it.

It is to be chosen in Pieces not too large, with the inner or brown Part sound and firm, and of a very sharp Taste. It is apt to be worm-eaten, but in that Case it is wholly to be rejected, as having lost the far greater Part of its Virtue.

The *Cortex Winteranus* was wholly unknown to the Ancients : The first Discovery of it among us is owing to Captain *Winter*, who, in the Year 1567.

went

went as far as the *Streights* of *Magellan* with *Sir Francis Drake*, but accompany'd him no farther in that famous Voyage in which he went round the World: He found this Bark on the Coasts of *Magellan*, and bringing a large Quantity of it with him in his Return to *England*, it became used in Medicine, and ever after call'd by his Name. It is not however peculiar to the Place where he found it, but is frequent in many Parts of *America*.

The Tree which produces it is one of the *Arbores fructu umbilicato minore* of *Ray*. It is described by *Caspar Baubine* under the Name of *Laurifolia Magellanica Cortico acri*, by *Mr. Ray* under that of *Lauro similis arbor sed procerior cortice piperis modo acri et urente*, and by *Sir Hans Sloane* under that of *Periclymenum rectum foliis laurinis cortice acri aromatico*. It grows to the Height and Size of our ordinary Apple-Trees: Its Branches are very numerous and spreading: Its Bark externally of a greyish Colour, and brown within: Its Leaves resemble those of the Bay, they are two Inches and half long, and an Inch broad; smaller at both Ends than in the Middle, but obtuse and somewhat bifid at the Extremity: The Flowers are white and sweet scented, and grow four or five on a Pedicle: The Fruit are a sort of small Berries, three or four standing together on the same Pedicle; they are green spotted with black, and they contain blackish Seeds of an irregular Figure, not much unlike Grape Stones.

The Virtues of this Bark were discover'd by the *English* Sailors on board Captain *Winter's* Ship, they first used it by way of Spice to their Foods, and afterwards for the Scurvy, with great Success. It is a Stomachic, Cordial and Suroric; beside the Virtues for which it is famous against the Scurvy, it is good in Palsies and Rheumatisms; and a Decoction of the Leaves is good, by way of Fomentation, for the Parts externally affected by the Scurvy. The *English* Sailors made it famous also for its Virtues against the Poison of a certain Fish, common about the *Magellanick* Sea, and which they call'd the Sea Lion. They eat the Flesh of this Fish, and fell into many Illnesses after it, among which one was attended with a peeling off of the Skin of their whole Bodies, not without excessive Pain, this they remedied by the *Cortex Winteranus*; but by the Accounts we have of the Effects of the eating this Fish, as they are call'd, they were rather Symptoms of an inveterate Scurvy, which therefore it is no Wonder this Bark did them great Service in.

The Description we have given agrees but very badly with what is generally met with in the Shops, under the Name of *Cortex Winteranus*; the true Bark of this Name being very rarely met with among us, and the *Canella Alba*, or white Cinnamon next to be described, being usually sold in its Place, and under its Name.

CHAPTER IV.

CANELLA ALBA,
White Cinnamon.

THE Bark which we commonly call *Cortex Winteranus*, though very improperly, in the Shops, and which some have nam'd *Cortex Winteranus Spurius*, and others *Costus Corticosus*, is properly the *Canella Alba* to be described in this Chapter.

It

It is a moderately thick Bark, brought over to us in Tubes or Pipes, like the Cinnamon and *Cassia*, into which it has roll'd itself up while drying: These are usually as thick as a Man's Thumb, sometimes much thicker; they are commonly also composed of a much thicker Bark than that. This Bark is like Cinnamon, only the inner Rind of the Tree which produces it, separated from the outer while fresh, and dry'd singly, not like the true *Cortex Winteranus*, composed of both dry'd together. It is throughout of the same Substance, which is moderately compact and dense, and of the same pale whitish Colour; it is moderately heavy, very considerably hard, and of an aromatic Smell, with some Pungency: Its Taste is very acrid, and aromatic, and resembles a Mixture of Cinnamon and Ginger, with some small Portion of Cloves all taken into the Mouth together.

Many People distinguish this *Cortex Winteranus*, as they call it, into two Kinds, a larger and a smaller; the one in thin and short Quills, the other in larger, longer, and thicker Tubes; the smaller have a sharper Taste than the others, but they are evidently no other Way different, than as the Bark of the larger and smaller Branches of the same Tree.

The *Canella Alba* was wholly unknown both to the antient Greeks and Arabians: It has only been known in Europe since the Discovery of America.

The Tree which produces it is one of the *Arbores bacciferae umbilicatae* of Ray. It is described by *Linnaeus* in his *Hortus Cliffortiana* under the Name of *Winterania*, and by *Catesby*, Sir *Hans Sloane*, and others, under that of *Arbor baccifera laurifolia aromatica fructu viridi Calyculato racemoso*. It grows to the Height of our common Pear-Tree: Its Trunk is often fifteen Inches or more in Diameter: Its Branches are numerous and spreading: Its outer Bark is greyish and wrinkled; its inner one whitish and smooth. Its Leaves are like those of our Bay-Tree; they are about two Inches long, and an Inch broad, and stand on long Pedicles: The Flowers are small, of a purplish Colour, and placed in a sort of Umbels in the Extremities of the Branches: These are succeeded by roundish Berries, which stand in the Cup of the Flower, and are of the Bigness of a Pea; green at first, but afterwards purplish, and contain in a soft pulpy Matter, blackish smooth Seeds.

It grows in wet Places in *Jamaica*, and other of the *American* Islands: The Leaves, the Wood, the Fruit, and every Part of the Tree, have a hot, acrid, and aromatic Taste. The *Indians* use the Bark in their Sauces, and find it supply the Place of Pepper and Cloves together very well. It has also the Virtues of the *Cortex Winteranus*, though in a more remiss Degree: It is an Antiscorbutic and Stomachic: It is good against Flatulencies, and is by many greatly recommended in paralytic Disorders. It abounds in a heavy aromatic Oil, which it yields plentifully on Distillation: This is of a yellowish Colour, and sinks in Water; and is used by People, of more Art than Honesty, to adulterate Oil of Cloves with, and sometimes that of Cinnamon.

C H A P T E R V.

C O R T E X P E R U V I A N,
Peruvian Bark.

TH E *Peruvian* Bark, or *Quinquina*, is a hard and rough Bark, brought to us partly in Quills or Tubules as the Cinnamon, and partly in flattish or irregular Pieces, which are the Fragments of the Bark of larger Branches of the Tree, than those which are in the hollow or quill Form are taken from. The quill Pieces are from the Thickness of a Man's little Finger to that of his Thumb, and are composed of a Substance of the Thickness of a Shilling, or from that up to a sixth of an Inch ; the other Pieces are sometimes considerably thicker than this. It is much less beautiful to the Eye than Cinnamon, being never brought in such long regular Pieces, nor so smooth : Its Surface is rough, corrugated, and chop'd, and crack'd in many Places ; and often cover'd in Part with a small fibrous whitish Moss : It is of a greyish brown Colour externally, and of a dusky brownish, with some faint Mixture of an Orange Colour within. It is of a considerably firm Texture, very hard, and appears resinous when broke. It has no very remarkable Smell, but is of an intensely bitter Taste, but with a Mixture of something aromatic, and an Austerity and Astringency in it.

Peruvian Bark is to be chosen firm, sound, and of a bright Colour, approaching to that of Cinnamon, of a strong Taste, not hard and woody, but yielding to the Teeth in chewing, and not glutinous in the Mouth. The smaller Pieces, which are roll'd up in Quills, are generally the best ; the larger and flatter Fragments have less Virtue. We sometimes meet with it cut into thin Slices, and of a yellower Colour than ordinary ; this is of a very strong Taste, and is the Bark of the Root, not of the Trunk or Branches of the Tree : The *Spaniards* esteem this the very choicest of all the Kinds. The Buyer is to take Care that it is not adulterated with other Barks. Some of our Druggists have found the Way of mixing with it the Bark of the Cherry-Tree, and because this wants Bitterness, there have not been wanting some, who have steep'd it in a Solution of Aloes before they mix'd it among the Bark ; but this is easily discover'd in its native State by the want of Bitterness, and in this tinctur'd State by the very different Flavour of the bitter of Aloes, and that of the *Quinquina*.

The Antients were wholly unacquainted with this excellent Medicine, they have left us a thousand Febrifuges, which however extol'd by some, their own Accounts prove to have been insufficient ; and nothing is more evident, than that intermittent Fevers were the great *Opprobrium Medicorum*, till since the Discovery of *America*, and the bringing this Bark among us.

The Tree which produces it is one of the *Pentandria Monogynia* of *Linnaeus*, and one of the *Arbores fructu umbilicato majore* of *Ray*. It is but a moderately tall Tree, and is full of Branches : Its Trunk rarely exceeds six or eight Inches in Diameter : Its Leaves are oblong, three Inches in Length, and about an Inch and half in Breadth, or somewhat more : The Flowers are small and purplish, and stand in Clusters about the Extremities of the Branches ; the Flower consists

consists of a single Petal, forming a long Tube, opening at the End into a somewhat wider Mouth, where it is divided into five or six Segments. These are succeeded by Capsules of the Shape of an Olive, which when ripe split open Lengthwise, discovering two Cells divided by a Membrane, and contain each a number of small flatted Seeds, surrounded with a membranaceous Edge. It grows in great abundance in *Peru*, particularly in the Forests that grow on the Mountains about *Loxa*, or *Loja*.

The *Cortex Peruvianus*, distill'd in a Retort, yields first about a third Part of its Weight of Phlegm, - the first Runnings of which manifest only an acid, but the latter a Mixture of an urinous Salt with it; after this comes a thick Oil of the Consistence of Lard, and in Quantity about an eighth Part, or somewhat less, of the Weight of the Bark originally put in. The Remainder taken out of the Retort, and calcined in an open Fire, yields by Lixivation a fix'd Salt of the alkali Kind, but with something of the *Sal Salsus* in it, in the Quantity of about two Drams from the Pound.

The *Peruvian* Bark possesses the stomachic Virtues of the other Bitters, and that in so eminent a Degree, that it is a Question whether any other of the celebrated Stomachics are equal to it: It strengthens the Stomach, promotes the Appetite, and assists Digestion; it dissipates Flatulencies, and is a very good Medicine against Worms. Its great Virtue however is a Febrifuge, it cures all Intermittents safely and speedily, if properly given. Its febrifuge Virtue was discover'd to us by the *Indians*, among whom it had many Ages before been discover'd, they say, by a Person's being cured of an Intermittent by drinking of the Water of a Pond, into which some Trees of it had before accidentally fallen: Though the *Indians* had this in Use long before they knew the *Europeans*, their Hatred to the *Spaniards* made them long conceal it from them. It was not discover'd to any Body of this Part of the World, till the Year 1640, when a *Spaniard*, who had behaved well to some of these People, received the Discovery as a Reward for it. He was Governor of the City of *Loxa*, and it was not long after he had been entrusted with the Secret, that he found Occasion to employ it much to his Advantage. The Lady of the Vice-Roy was seiz'd with one of those terrible Tertians, which are so frequent in that Part of the World, and had try'd every thing in vain for Relief, when the Governor of *Loxa* heard of it, and cured her with the new Medicine. This was sufficiently talk'd of, and the Medicine call'd from the Title of the Lady, the Countess's Powder. After this the Jesuits brought over a vast Quantity of it, which was, in the Year 1649, distributed all over *Europe*, and did great Cures. It was, from these Missionaries bringing it over, then call'd *Pulvis Patrum*, and Jesuits Powder; and the Cardinal *de Lugo* having bought up a vast Quantity of it, and distributed it to the Poor, as well as others, who wanted it, it became afterwards call'd Cardinal *Lugo's* Powder.

Notwithstanding the Success which attended this new Febrifuge, whenever given properly, there were many of the Physicians at that Time who were scrupulous of using it, as suspecting it could not be safe to carry off such a Disease so speedily, and without Evacuations; but a long and happy Experience of it has now taught us, that it is one of the greatest, and in prudent Hands, one of the safest Medicines in the World. It is given in Powder from a Scruple to a Dram for a Dose; and we have a Tincture, and an Extract of it in Use in the Shops.

TINCTURA

TINCTURA CORTICIS PERUVIANI SIMPLEX,
Simple Tincture of Peruvian Bark.

Take fine *Peruvian* Bark four Ounces, powder it, and put to it a quart of Proof Spirit; let them digest together for three Days in a gentle Sand-heat, and when cold strain off the Tincture and filter it for Use.

TINCTURA CORTICIS PERUVIANI VOLATILIS,
Volatile Tincture of Peruvian Bark.

Take of *Peruvian* Bark in Powder, four Ounces; Spirit of *Sal Armoniac* prepar'd with Water and an alkaline Salt, a Quart; put them together into a close Vessel, and after digesting them a Week without Heat, strain off the Tincture, and filter it for Use.

EXTRACTUM CORTICIS PERUVIANI,
Extract of Peruvian Bark.

Take of fine Bark one Pound, powder it and mix it with six Quarts of Water, boil these together for an Hour or two, then strain off the Liquor, which will be red and transparent while hot, but will grow yellowish and turbid when cold. Boil the Bark again with the same Quantity of fresh Water, and strain this off in the same manner; repeat these Boilings till the Liquor is clear when cold, then mix all the Decoctions together, and evaporate them gently over a slow Fire, continually stirring them to avoid burning: The Mass may be either taken off the Fire when of a Consistence fit for Pills, or it may be suffered to remain on it till dry enough to be powder'd: The former is call'd the soft, the latter the hard Extract of Bark.

It has been usual to make this Extract with the Help of Spirit of Wine, but Experiments have proved, that the full Virtue of the Medicine is to be obtained thus, by means of Water only; the resinous Parts, as united with the others, being dissoluble in boiling Water.

Of B A R K S

Less used in M E D I C I N E.

CHAPTER I.

CASSIA CARYOPHYLLATA,
Clove Bark.

THE *Cassia Caryophyllata* is the inner Bark of a Tree, collected and preserved in the same manner as Cinnamon, and much resembling it in Appearance: We usually meet with it in Form of Tubes like those of Cinnamon: These are generally of the Thickness of a Man's Finger, and five, or eight, sometimes more Inches in Length; and the Bark itself is seldom much thicker than a Shilling. It is of a dusky reddish brown Colour, a little deeper than that of Cinnamon, otherwise not unlike it, and is of a tolerably firm Texture, and

and moderately heavy: Its Smell is very aromatic, and fragrant: Its Taste is at first a faint one of the Cinnamon Kind, but after a Moment there is perceived a Flavour of Cloves very strong, and at length so pungent, that it seems to burn the Lips in manner of a Caustic. It is to be chosen fresh and sound, of a good Colour, the more red there is in it the better; not easily broken, and of a very acrid Taste.

The Tree which produces it is one of the *Enneandria Monogynia* of *Linnaeus*, and one of the *Arbores fructu umbilicato minore* of *Ray*. It is described by *Hernandez* under the Name of *Carringa*, and by *Herman* under that of *Myrtus Americana Carringa dicta*. It grows to a large and tall Tree: Its Leaves are like those of the Cinnamon-Tree, but larger and thicker: Its Bark is of a deep brown on the Surface. These are all the Characters *Hernandez* gives of it; but *Piso* adds, that its Flowers are small and blue, with a white Umbilicus, and are variegated with yellow, or Orange colour'd Lines. The Bark of the young Branches alone is taken off for Use, and this is separated from the outer Rind, and then cut into Lengths of six, eight, or ten Inches, and laid in an open Place to dry, where it rolls itself in the manner of Cinnamon.

It is frequent in many Parts of *South America*, particularly in the Island of *Cuba*; and also in *Guinea*, where it is strip'd of the Bark annually in considerable Quantities, being in common Use upon the Spot by way of Spice in Foods. It has much the same Qualities with Cloves, but in a somewhat more remiss Degree. It is in Medicine a Stomachic, Carminative, and Alexipharmic.

Cassia Caryophyllata was wholly unknown to the antient *Greeks*, and to the *Arabians* too, though *Hernandez* would fain prove, that their *Kerfa* signify'd this Bark. All that *Avicenna* means by that Word, is either the Cinnamon collected with the Wood, as was the Custom in the Time of the Antients, or else the young Twigs of the Clove-Tree cut off with the Bark, and sent over together. The Tree which produces this Bark was as entirely unknown to them as to the *Greeks*.

CHAPTER II.

CORTEX CASCARILLÆ, *Cascarilla Bark.*

THE Cascarilla Bark, call'd also by late Writers *Schacarilla*, and *Zagarilla*, *Cortex peruvianus griseus*, *China China Spuria*, and *Aromatica*, and *Cortex Eleutherii*, and *Eleterii*, is a Bark brought to us roll'd up in Form of smaller or larger Tubules, and of a grey Colour. Its Tubules are generally small, not thicker than a Man's little Finger, but sometimes they are of an Inch in Diameter, and their general Length is two, three, or four Inches: The Bark itself is from the Thickness of a Shilling to that of a crown Piece, or more, but the Thickness of a half Crown is about the usual Standard. It is externally of a kind of whitish grey Colour, but internally of a brown, or ferrugineous Hue, with some Admixture of reddish in it: It is of a firm and compact Texture, not easily broken, and considerably heavy. Its Smell is somewhat aromatic, and when burnt it diffuses a fine Fragrancy, somewhat like the Perfumes: It is bitter and aromatic to the Taste: It is brought to us from some of

of the Provinces of *South America*, particularly from *Paraguay*, where it is very abundant.

It is to be chosen in small Tubules, not easily broke, very fragrant when burnt, and of a strongly bitter Taste. The Tree which produces it is yet unknown to us: The Bark was wholly unknown to the World till very lately. Dr. *Stiffer* is the first who has written any thing of it, but he declares that he received it from an *English* Gentleman, who told him, that we used it among Tobacco, to take off its disagreeable Smell while smoaking. It was confin'd to this Use alone for a considerable Time, till some Merchants selling at one Time a large Quantity of it, under the Name of *Peruvian* Bark, it got into Use in many Parts of *Germany* as a Febrifuge: It was not able to maintain its Character in the Place of that noble Febrifuge, but as *Stiffer* observes, though its Virtues in this Way are not very great, it contains resinous and balsamic Parts, which may render it highly serviceable to us on many Occasions. *Stiffer* prepar'd a Tincture of it with Spirit of Wine and Salt of Tartar, which he commends greatly in the Stone, in Asthmas, Consumptions, the Scurvy, and many other Diseases; and declares it to be an excellent Carminative, and Diuretic. He also prepar'd another Tincture of it in Spirit of Hartshorn, or with Spirit of Wine and Salt of Hartshorn, which he gave in the Gout and Rheumatism with Success. After this *Joannes Ludovicus Apinus* in the Year 1697, gives it a great Character as a Febrifuge, and speaks with great Assurance of its Virtues, not only in Intermittents, but in epidemic and petechial Fevers, in which he gave it with great Success: He gave it sometimes in Powder, a Dram for a Dose, which he repeated twice, or three times a Day; and sometimes in the Form of Extract, made with Water alone: This Extract he gave in small Doses every six Hours: It caused Sweats without fainting, and the Patient usually grew evidently better after a second or third Dose. *Stahl* prescribes it in Pleurifies, Pereaumonies, and all Diseases of the Breast; and speaks greatly of it in all Fevers attended with Diarrhoeas and Dysenteries, in which he acknowledges, that he knows no greater Medicine. *Junker* declares it to be in Intermittents a Remedy scarce inferior in Efficacy to the *Peruvian* Bark, and preferable to it on many Occasions, as not having the great Astringency of that Drug: He recommends it in all inflammatory Cases, Quinzies alone excepted, and particularly extols it in Weaknesses of the Stomach; but both this Author, and *Albertus*, who has also treated of the Virtues of this Bark, are of Opinion that *Apinus* has said too much in its Praise in petechial Fevers.

CHAPTER III.

SIMA ROUBA, *Guiana Bark.*

THE *Sima Rouba*, or as we call it, *Guiana Bark*, from the Name of the Province whence it is brought, is a thick Bark; not brought to us in Quills or Tubules, as the others usually are, but in large Pieces adhering to the Fragments of the Branches, or Roots of the Tree it belongs to; and easily separated from them by raising it with a Knife, and sometimes merely by the Fingers. The Wood to which it thus adheres is white, of a spongy Texture, insipid

insipid to the Taste, and very light. The Bark itself is of a yellowish Colour, and of a somewhat compact Texture: Its Surface is rough and uneven; it is not very heavy, and is easily broken; it has no very remarkable Smell, and but a faint Bitterness in the Taste; when broken Lengthwise it is found to be composed of a multitude of thin Fibres, which are separately somewhat tough, though the whole Bark breaks easily enough. It is brought to us from *Guiana*, where the Inhabitants use it in Diarrhœas and Dysenteries. It is also produced in some other Parts of *South America*, but no where else in such Plenty. The Tree which produces it is wholly unknown to us. It is to be chosen in moderately thick Pieces, sound, and somewhat firm, and of a slightly bitter, but not disagreeable Taste. It is of a balsamic, gummy, resinous Nature; the Decoction of it in Water, when cold, becomes of a milky Hue, and after a Time lets fall a resinous Sedgment.

It was first known in *Europe* so lately as in the Year 1713: It came recommended as a Stomachic, and Astringent, but it was not used till 1718, when *Jussieu* of *Paris* cured with it and epidemic Dysentery, which had baffled all the common Medicines, and stood it against even the *Ipecacuanha* itself.

It may be given in Powder from ten Grains to half a Dram, but the most usual and successful Method is in Decoction: Two Drams of it are boiled in a Quart of Water to the Consumption of a third Part, and the Decoction is then to be divided into four Doses, one to be taken every three Hours: This is to be repeated till the Patient is wholly recover'd. When the Decoction is made stronger, it occasions Vomiting, Sweats of a very profuse Kind, and often an Evacuation of more Blood than before; but in this weaker Decoction it succeeds very happily, the Patient has no Tendency to vomit, no extraordinary Stools are occasioned by it, the Pains are eased almost immediately, Sleep comes on, and the Discharges by Urine are render'd more copious; the bad Smell of the Stools goes off, and they by Degrees become of their natural Condition, and the Patient recovers his Appetite with his Health. It is a very happy Medicine in this Particular, also that it may be given as an Astringent where requisite, even while the Menfes are flowing; it acts only in the *Primæ Viæ*, and leaves all the other Evacuations undisturb'd, while it is performing its office there.

CHAPTER IV.

CODAGA PALA,
Conesti, or Codaga Bark.

THE *Codaga Pala*, or *Conesti*, as it is variously call'd, is a Bark but very lately known among us as a Medicine. It is a Bark brought partly in small Quills or Tubules, and partly in larger and flattish Pieces; the former on the stripping of the young Shoots, the others of the larger Branches, and of the Root. It is of a dusky blackish Colour on the Surface, and somewhat paler within; and when any Part of the Wood remains within it, that is found to be whitish: It is from the Thickness of a Shilling to near a quarter of an Inch in the large Pieces: Its Surface is rough, and often is crack'd and flaw'd, and not unfrequently

unfrequently is cover'd with a mossy Substance : It is considerably hard, moderately heavy, and of a bitter and pungent Taste.

It is to be chosen in the Quill Form, the Bark of the young Branches, being greatly preferable to that of any other Part of the Tree ; and these, before they are used, are to be clear'd of that mossy Substance that often covers them, and is insipid to the Taste, and of no Virtue.

The Tree which produces this Bark is described by *Burman* in his *Thesaurus Zeylanicus* under the Name of *Nerium medicum siliquis angustis erectis longis geminis*, in the *Paradisus Batavus* under that of *Apocynum erectum Malabaricum frutescens jasmini candido flore*, and in the *Hortus Malabaricus* under that of *Codaga pala*. It is rather a Shrub than a Tree, tho' usually call'd so. Its Root does not penetrate deep into the Earth, but spreads every Way under the Surface, and is cover'd with a dark blackish purple Rind, of a bitter and pungent Taste. The Stem does not rise high, but is divided into many Branches cover'd with a blackish Bark, and often over-grown with a mossy Foulness. The Wood is white and soft : The Leaves are long, narrow, and pointed, and green both on the upper and under Side ; when broken they yield a milky Juice. The Flowers are white and very beautiful ; they are monopetalous, and divided into five Segments, and are of a very sweet Smell. The Cup remains after the Flower is fallen, and from it there grow two long and slender Pods, join'd at their Ends by twisting one about the other, and containing a large Quantity of a cottony Matter ; among which are a number of oblong and striated Seeds of a greyish Colour.

The Shrub is frequent in *Ceylon*, and in *Malabar*, where the Natives esteem it greatly in Diarrhœas : They take indifferently the Bark of the Root or Branches, which they dry and powder for Use : They make it their almost sole Remedy in Lienteries and Dysenteries, and they use it externally in Decoction against Pains and Tumors of all Kinds, and in every Part of the Body.

We generally use it in Powder, which is given from half a Dram to a Dram for a Dose, and is one of the best Medicines at this Time known in Diarrhœas. It is to be given in repeated Doses for three or four Days, in which Time the Cure will be gradually perfected, the Stools at first becoming more copious, but without Pain : After this they gradually become of a better Condition, and generally on the third or fourth Day of the Use of the Medicine, they are found of their natural State and Colour. It is proper to give a Dose of *Ipecacuanha* before the entering on this Course, and with this Precaution in Diarrhœas, that are not attended with a Fever, there is no Doubt of a speedy Cure : Where the Person is feverish Bleeding is proper to be premised ; and in People constitutionally subject to Diarrhœas, the Medicine is to be continued every Night and Morning for a Week or Fortnight after the Cure is perfected, to prevent a Return.

CHAPTER V.

CORTEX CAPPARIS,
Capers Bark.

THE *Cortex Capparis* of the Shops is the Bark not of the Branches but of the Root of the Shrub which produces it: We meet with it in Pieces of a tubular Figure, or in Fragments of such Pieces; sometimes the Tubes are whole, and are four or five Inches long, and of the Thickness of a Man's Thumb; but more frequently we see only Pieces of these, or Pieces of the Bark taken less carefully from the Root. The Bark itself is usually of the Thickness of a Crown Piece, sometimes less, but more frequently more; it is of a rough and uneven Surface, rising into Protuberances, and often crack'd and opening in different Places; it is of a greyish Colour, moderately heavy, and of a tolerably firm Texture; it has no very remarkable Smell, but its Taste is bitterish and pungent. It is to be chosen fresh and sound, not in too thick Pieces, and not too easily broken.

The Shrub which produces it is one of the *Polyandria Monogynia* of *Linnaeus*, and of the *Arbores baccifera* of *Ray*. It is the same Shrub whose Buds are pickled, and in common Use among us under the Name of Capers.

All the botanical Writers have described it under the Name of *Capparis*, *Capparis Spinosa*, and *Capparis spinosa folio rotundo*. The Leaves are roundish, and stand alternately on the Branches: The Flowers are small, and consist of four Petals; they stand on long Pedicles, and grow out of the *Axæ* of the Leaves: The Fruit is an oblong Berry. The Bark of the Root is an Aperient and Attenuant; it is recommended in nephritic Cases, and in Dropsies, Jaundices, and many other chronic Diseases, but the present Practice does not pay any great Regard to it.



PARTS of VEGETABLES

Used in MEDICINE.

CLASS the NINTH.

W O O D S.

THE Bodies of this Class are scarce more numerous than the Barks: They are arranged here in two Divisions, the first containing those more frequently used in the Shops; the second those which are less so.

Of the first Division are,

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|---------------|------------------------|----------------|
| 1. GUAIACUM. | 3. The THREE SAUNDERS. | 5. ALOES WOOD. |
| 2. SASSAFRAS. | 4. LOGWOOD. | 6. RHODIUM. |

Of the latter Division are,

- | | |
|--------------------|-------------|
| 1. NEPHRITIC WOOD. | 3. LENTISK. |
| 2. SNAKE WOOD. | 4. PAVANA. |

W O O D S

More frequently used in MEDICINE.

CHAPTER I.

LIGNUM GUAIACI,
Guaiacum Wood.

GUAIACUM is an extremely hard and solid Wood, of a dense compact Texture, and remarkably heavy; it consists of two Parts, a central Matter or Heart, as it is call'd in Trees, and an exterior one or Blea; the central Part is extremely hard and ponderous, and is of a greenish black Colour, or else it is variegated with a pale whitish Colour, a dusky green, and a brownish with the black: The external Part is yellowish, or of the Colour of Box-Wood, this is cover'd, when we see the Fragments of the Branches of the Tree entire, with a thin but very firm and strong Bark, of a woody Texture, but seeming composed of a multitude of thin Plates or Laminæ, laid over one another; it is somewhat resinous, and is externally of a mix'd greyish and greenish black Colour, or variegated with Spots of a dusky greenish and a livid black, within it is of a pale Colour. The Wood is of a fragrant Smell, and of an aromatic and pungent but somewhat bitterish Taste, but not disagreeable; the Bark is of a more acrid Taste, and more disagreeable to the Palate.

The Authors who first treated of this Wood mention several distinct Kinds of it, as they supposed them to be; *Ovicola* makes the *Guaiacum* and the *Lignum sanctum* two different Woods; and *Caspar Bauhine* distinguishes three Kinds of the *Guaiacum*, the one he calls *Guaiacum* with a great Matrix or Heart, which is the *St. Domingo Guaiacum* of *Hernandez*; a second he calls *Guaiacum* with scarce any Matrix at all; and a third the Wood of the lentisk leaved *Guaiacum*. All these however are the Wood of Trees of the same Genus, and perhaps of the different Parts of the same Tree, the Heart being larger in some Parts than in others, according to their different Growth. Even the different Species of the *Guaiacum* Kind, so far as has been hitherto observed, all afford the same Sort of Wood, no Way distinguishable as the Produce of one or of the other of them, but differing greatly in Solidity, and in the Quantity of its Heart, as cut from a younger or an older Tree.

The *Guaiacum* Tree is of the Number of the *Decandria Monogynia* of *Linnaeus*, and of the *Arbores Fructu per maturitatem sicco* of Mr. Ray. It is accurately described by *Plumier*, and he distinguishes two Kinds of it, differing in the Shape of the Fruit, the one of which is roundish, and the other square. He calls the first *Guaiacum flore caeruleo fructu rotundo*. And Sir Hans Sloane describes this also in his History of *Jamaica* under the Name of *Pruno vel Euonymo affinis arbor folio alato buxco subrotundo flore pentapetalo caeruleo racemoso fructu aceris cordato cujus cortex luteus corrugatus Semen unicum majusculum nigricans nullo officulo testum aperit*. It sometimes grows to a very large Tree; but more usually the Want of a good Soil prevents this. The Bark of the Trunk is smooth; the Leaves are alated, and stand two on each Side the middle Rib in Pairs. The Flowers grow on the Tops of the Branches, and are blue and of the Size of *Orange* Flowers. The Fruit which succeeds these is roundish, but cordated, of the Bigness of a Finger's End, and somewhat hollowed. This Tree is common in the *Antilles* Islands, and particularly in *St. Domingo*.

The other Species is the *Guaiacum fructu tetragono flore caeruleo fimbriato*, and is the *Hoaxacan*, or *Lignum Sanctum* of *Hernandez*. This Species is smaller in its Stature than the other, but its Wood is as firm and solid. The Leaves of these are pinnated as those of the other; but there are usually four or five Pairs of Leaves on each Rib. The Flowers are like those of the other, but fimbriated, and the Fruit is square in the Manner of that of our *Euonymus*. It is blue, and is divided within into four Cells, in each of which is contained one Seed, which is hard, reddish, and of the Shape of a small Olive.

Both these Trees produce a yellow-Wood with a blackish Matrix, and both when cut afford a Resin of a dusky greenish Colour, and of an acrid Taste. The Wood of both is indifferently brought into *Europe* under the Name of *Guaiacum*, and is of the same Virtue.

Guaiacum Wood is to be chosen fresh, sound, and firm; hard, and very heavy, and of an acrid Taste. It should be kept in the Block, and only cut or rasped as it is wanted; that kept in Chips losing much of its Virtue. Those Pieces are best, which have the largest Heart, and least of the yellow Part.

Guaiacum, distilled by the Retort, yields a very considerable Quantity of Phlegm; the first Runnings of which smell and taste strongly of the Wood, and contain an alkaline volatile Salt, as is proved by Experiments, with a Solution

lution of corrosive Sublimate. What runs afterwards contains with this an acid Salt also, and with this Phlegm there comes over about a ninth Part of the Weight of the Wood, of a black thick Oil like a Syrup; this sinks to the Bottom of the Vessel; but with it there comes over a small Portion of a lighter yellowish Oil, which swims on the Water. The Remainder in the Retort, calcined in an open Fire, yields a small Quantity of a fixed Salt by Lixiviation, which when examined proves not to be solely alkaline in its Nature, but to have a Mixture of a *Sal Salsus* with it. The thick Oil of *Guaiacum* newly made, mixed with an equal Quantity of Spirit of Nitre, takes Fire, and in great Part burns away, the Remainder being a light fungous Coal, not easily capable of any further Alteration.

The Bark of *Guaiacum*, treated in the same Manner, manifests a great Difference from the Wood. It affords a smaller Quantity of Phlegm, and that much more strongly impregnated with the urinous Salt; and the Remainder, calcined and lixiviated, affords three Times the Quantity of fixed Salt, and that merely alkaline. It is easy to infer from this, that they are, in the Hands of the skilful Prescriber, two very different Medicines, and that it is very injudicious in any Body to use them indifferently.

Guaiacum is attenuant and aperient: It promotes the Discharges by Sweat and Urine, and at the same time strengthens the Stomach and the other *Viscera*. It is an excellent Medicine in Obstructions of the Liver and Spleen, in Jaundices, Dropsies, and many other chronic Cases. It gives great Relief in Rheumatisms, and even in the Gout. It has been at one Time famous for curing the venereal Disease. We received the Accounts of its Virtues in that Way from warmer Climates, where Perspiration is easily excited to a very great Degree; and in these Places nothing is more certain, than that it still cures that terrible Disease singly. With us we find it insufficient. And indeed, the shorter Methods by Mercurials render the Use of any thing of this Kind less necessary than it might be before the bringing those powerful Remedies into Use.

The Bark is a more powerful Attenuant than the Wood, but it is less proper to People of a feverish Disposition. Neither of them are given much in Substance, the usual Way being in Decoction with Sassafras, and other Medicines of the same Intention.

Beside the Wood and the Bark of *Guaiacum*, we have a Resin of it kept under the improper Name of *Gum Guaiacum* in the Shops. This is a solid, but very friable Substance, much resembling common Resin, except in Colour, in which it is of a dusky greenish Hue, and sometimes, though less frequently, of a reddish. It is very acrid and pungent to the Taste, and when burnt, smells not unpleasantly, but much like *Guaiacum* Wood. This is given in the same Cases with the Wood, and the famous *Balsamum Polycrestum* is made of it.

CHAPTER II.

SASSAFRAS,
Sassafras Wood.

SASSAFRAS Wood, in some Measure, agrees with that of *Guaiacum* in its Virtues, but it is extremely different from it in all other Respects. It

is a very light and spongy Wood, of a pale whitish red Colour, with an Admixture of brown in it, and of a very fragrant and perfumed Smell, and of an acrid and aromatic sweet Taste, which is very agreeable. We receive it in large Billets, which are of a rough and irregular Surface, and are covered with a light and spongy Bark, of a greyish Colour on the Surface, and of a dusky brown within. This is of the same Smell and Taste with the Wood itself, but more acrid and pungent. It is to be chosen sound and firm, not too old, and of a very fragrant Smell when fresh cut. It should be kept in the Block, and only cut out as wanted for Use; for it loses much of its Virtues when kept long in the Chips. We have it from many Parts of *America*. Some prefer the Bark to the Wood for internal Use; and indeed its Smell and Taste seem to plead in its Favour.

We sometimes meet with Blocks of a heavier Wood offered to Sale among or under the Name of Sassafras: These resemble the Sassafras externally, and are of the same general Smell; but when examined, they are easily distinguished; they are Blocks of the *Lignum Anisi* or *Lignum Anisatum* of Authors. They are of a denser and more compact Texture than the Sassafras, and more resinous; and though they have the same general perfumed Smell with that Wood, they have a Smell of Anise Seed instead of the Fennel like Flavour of the Sassafras.

The Tree which produces the Sassafras is one of the *Enneandria Monogynia* of *Linnaeus*, and one of the *Arbores fructu calyculato* of Mr. Ray. It is described by all the late botanical Writers under the Name of *Sassafras Arbor* and *Sassafras ficulneo folio*. *Linnaeus* calls it *Laurus foliis integris et trilobis*, and *Plukenet* and others, *Cornus mas odorata folio trifido Sassafras dicta*. The Root of this Tree does not descend deep into the Earth, but creeps under its Surface. Its Trunk is large and single, naked for a great Way, but full of Branches toward the Top. The Leaves are large and like those of the Fig Tree, being divided into three Lobes, and are green on the upper Part, but whitish underneath. This is their Shape when full grown, but while young they resemble the Leaves of the Pear Tree, and scarce shew any Division at all. The Leaves remain green all the Winter. The Flowers are small, and stand in Clusters on the Tops of the Branches. The Fruit is a Berry like that of the Bay.

Piso describes two other Species of the Sassafras Tree beside this. This which affords us the true Sassafras he calls *Anhuiba sive Sassafras major*, the greater Sassafras Tree. The first of the others is called by the *Brasilians Anhuypitanga*, it has smaller, narrower, and thinner Leaves; and its Wood is of a whitish or yellowish Colour, with nothing of the Redness of the true Sassafras. The other of these is called by the same People *Anhuiba miri*. The Leaf of this is like that of the Bay Tree. The Fruit is black, and when ripe is very sweet scented; and both that and every other Part of the Tree is of a hot and acrid Taste. These are said to possess the same Virtues with our Sassafras, but the Wood of neither of them is ever brought among us.

Sassafras, distilled in a Retort, yields two Kinds of Oil, the one a clear and pellucid one, very fragrant, and heavy enough to sink in Water; of this there are about two Drams to be obtained from the Pound. The other is a thick and coarse empyreumatic Oil of a reddish Colour, produced in six times the Quantity of the former. Beside these it yields a large Quantity of an acid Phlegm,
and

and a small Portion of an urinous Spirit, or of a Phlegm sated with an urinous Salt. The Remainder, in the Retort, yields only a very small Quantity of a fixed Salt by Lixiviation, and that is not of the alkaline, but of the *Sal Salsus* Kind. Sassafras Wood is a Diuretic and Diaphoretic: It attenuates viscid Humours, and is good in all Cases of Obstructions of the *Viscera*. It is given in Cachexies, in scorbutic Complaints, and in the venereal Disease. It is seldom given in Substance; the usual Way of taking it being in Infusion in the Way of common Tea, in which Method it is very pleasant. The Oil is a very fragrant one, and possesses most of the Virtues of the Wood. It is best made by distilling the Wood in a common Alembic with a large Quantity of Water, in which Case it sinks to the Bottom, and is easily separated.

CHAPTER III.

SANTALA,

The Saunders Woods.

WE have in the Shops three very different Woods brought to us under the general Name of Saunders, which are distinguished according to their Colour, into the yellow, the white, and the red Kind. There are some who suppose the Ancients were acquainted with these as well as ourselves. Among these *Salmasius* thinks the *Sagalina* of some of the old Writers to be the same with these Woods: But as *Dioscorides* and *Galen* are both wholly silent about them, it is very probable they were not known at all in their Time; at least it is very evident that they were not known in Medicine. The *Arabians* are the earliest Authors we find making any certain Mention of them; they call them Sandal, and the modern *Greeks* speak of them as they do.

SANTALUM FLAVUM,

Yellow Saunders.

The yellow or citrine Saunders is a very beautiful Wood: It is of a close and even Texture and fine Grain. It is brought to us in Blocks cleared of the Bark, and of the outer Substance or Blea; the Wood we use being only the Heart of the Tree. These easily split in a longitudinal Direction, and separate into even and smooth Pieces, the Grain running perfectly even. They are very solid and firm, and considerably heavy; the Colour is a pale straw yellow, or the Colour of Lemon Peel. Sometimes there is a Mixture of a reddish or brownish with this, but oftener it is pure pale yellow. It is of an extremely sweet and perfumed Smell, somewhat like a Mixture of Musk and Roses, and of a somewhat acrid and aromatic Taste, with a slight Bitterness, but upon the whole very pleasant.

SANTALUM ALBUM,

White Saunders.

The white Saunders is a Wood much resembling the yellow: It is brought to us either in long and slender Pieces which have been split from others, larger, or else in Chips. It is of a tolerably dense and compact Texture, considerably hard and heavy, and of a white Colour. It is somewhat more friable than the yellow, but like that it easily splits in a longitudinal Direction, into even and regular Pieces. It is less subject to Knots than most other Woods: It is of a
fragrant

fragrant Smell, but much weaker than [that of the yellow, and of the same aromatic and agreeable Taste, but in a more remiss Degree.

The near Resemblance of the white and yellow Saunders, have led all that have written on them to suppose, they were very nearly allied. *Garcias* tells us that the Trees which afford them are so like to one another, that scarce any Body can tell them asunder at Sight, and that the distinguishing them is a peculiar Secret of the People who cut them down for Sale to the Merchants. But *Herman* gives us a more accurate Account, he tells us that they are indeed both the Wood of the same Tree, the yellow being the Heart of the Tree, and the white the Blea or outer Part between the Heart and the Bark.

The white and the yellow Saunders are to be chosen alike sound and firm, heavy and of a good Smell when cut. They should be chosen in the Block and not cut into Chips as they usually are; for in this Manner they soon lose much of their Virtue.

The Tree which affords them is called by the Natives *Sarcanda*: It grows to the Bigness of our Walnut Trees. Its Leaves are pinnated, and somewhat like those of the Lentisk; they are of a shining green. The Flowers are of a deep blackish blue. The Fruit which succeeds these is a Berry of the Size of an ordinary Cherry. These are green at first, but they grow black when ripe, and as soon as they are so, they fall off the Tree with the least Breath of Wind. *Bontius* tells us that a Species of Thrush is very fond of these Berries, and is of Opinion that many of the Trees are owing to the Seeds of them voided by these Birds after eating the whole Fruit. We have our yellow and white Saunders only from the *East Indies*. The Trees are most abundant in the Kingdom of *Siam* and in the Isles of *Solor* and *Timor*. The Wood while fresh is of a very powerful Smell and affects the Head. The People who cut it in the Places where it grows, are generally strangely affected by it. They become delirious for some Hours, and are oddly disturbed in their Minds; their Thoughts always however turn upon the Occasion of their Disorder, and they fancy themselves continually felling the Trees, and imitate their Actions, while they were doing so. They have with this Delirium a Fever, and a canine Appetite, the Rage of which while it lasts, urges them to eat the most filthy Things imaginable. Most of the People who go on the Expedition of cutting Saunders are seized in this Manner, and the Air and other Things have been suspected of occasioning it to Strangers. But *Bontius* judges much better in attributing it to the *Effluvia* of the Wood and Bark of the Saunders while fresh.

SANTALUM RUBRUM,

Red Saunders.

The red Saunders is a Wood very different in Colour and Qualities from the white and yellow: It is of a very dense and compact Texture, remarkably heavy, and very hard. It is brought to us in Logs of considerable Length, which are seen to be only the Heart of the Tree separated from the Bark, and the outer soft Wood or Blea. This does not split so regularly as the white or yellow, and its Grain when examined does not appear so strait and regular as in those throughout the whole Logs; but in many Places it is curled and rounded as if in Knots. The outer Part of these Logs are usually of a dusky or blackish red Colour. Their inner Part of a fine strong blood red, but without

any thing of that Blackness. It has very little Smell, nothing of the Perfume of the other Kinds, and is of an austere and astringent Taste.

The Tree which affords the red Saunders is so very different in its Figure from that which affords the others, that it is a Wonder they ever became called by the same Name. It is called *Patanga*, but we have no perfect Description of it; *Herman* however tells us enough for the distinguishing it from the others abundantly; for he informs us, that it is a siliquose Tree, not a bacciferous.

Some Caution is to be used in the buying the Saunders, that wrong Woods are not imposed upon us in their Place. There is a yellow Wood called Citron Wood and Candle Wood, often sold under the Name of the yellow Saunders; But this is easily distinguished by People aware of it, as it is heavier than the true Saunders, and is more resinous, and its Smell though very fragrant, has not the Rose like Flavour of that, but smells somewhat like Lemon Peel. Its Grain also is less regular and even, and it is much more inflammable, readily taking Fire, and being very difficultly extinguished. This is the Wood of the *Nerium altissimum folio angusto flore albo* of Sir *Hans Sloane*, and the *Nerium Americanum lactescens* of others.

This is almost the only Wood used to adulterate the yellow Saunders; but the red is adulterated by a Variety of red Woods brought from the *East Indies*, and from *America*; among these the *Lignum Sappare* of the *Dutch*, which is the Wood of *Tsia Oangam*, of the *Hortus Malabaricus*, and the *Lignum Brasiliense rubrum*, which is the Wood of the *Arbor Brasilea* of Authors, are the most frequent. But the red Saunders is easily distinguished from all these by its Taste, and its strong Colour. We usually meet with it in Raspings; but there is less Danger of being cheated in it, when it is bought in the Logs. The others have both a sweetish Taste instead of the austere and astringent one of the Saunders, and they are both of a less intense red. The *Brasilian* Wood, which is the most common Counterfeit, has a considerable Mixture of yellowish with it, which is not at all in the Saunders.

The three Kinds of Saunders agree very much in the Principles they yield on a chemical Analysis. They all afford a Phlegm containing an acid Salt in a moderate Quantity, and an extremely small Portion of an urinous one, with an Oil heavier than Water; so that in whatever Way distilled, whether dry by the Retort, or in the common Way with Water by the Alembic, it sinks in the Water it comes over with. The Oil of the yellow Saunders is the thinnest and most fragrant; that of the white is next to this in these Qualities; the Oil of the red is thickest and heaviest of all.

Some Authors have ranked the Saunders among the cooling Woods, but *Hoffman* very judiciously censures them for it. They are evidently all of them Attenuants, and all have an Astringency, but the red most of all. They are accounted Cordials, and are said to be good in Obstructions of the *Viscera*; but they are very little used at present, except as Ingredients in some of the Compositions of the Shops.

CHAPTER IV.

LIGNUM CAMPECHIANUM,
Logwood.

THE Logwood or *Lignum Campechianum* is a Wood of a very dense and firm Texture. It is brought to us in large and thick Blocks or Logs, and is the Heart only of the Tree which produces it; the Bark and the softer Part or Blea being separated from it. It is very heavy and remarkably hard. It is not easily cut, but it splits tolerably readily in a longitudinal Direction, its Grain running regularly that Way. Its Colour is a deep and strong red, and its Taste very astringent and austere, but with a remarkable Sweetness in the Mouth, like that of *Terra Japonica*.

Logwood is to be chosen in large and thick Pieces, sound, and of a good Colour. The Tree which produces it is one of the *Arbores siliquosæ floribus papilionaceis* of Ray. It is described by Breynius in his *Prodromus* under the Name of *Crista pavonis Coronillæ folio secunda, sive Tinctoria Indica flore luteo racemoso minore, siliqua latissima glabra*; and in the *Prodromus* to the *Paradisus Batavus*, under that of *Erythroxylum sive lignum rubrum Indicum spiritissimum Coluteæ foliis, floribus luteis, siliquis maximis*. It grows both in the East and West Indies, but no where so plentifully as in the Coast of the Bay of Campechy. They cut it in Spring when it is full of Sap, at which time they find it easy after they have cut the Trunk and larger Branches into Lengths, to split off the Blea or soft outer Wood and Bark; and then they lay up the rest for drying.

It has been long known among the Dyers, but it is only of late that it has been introduced into Medicine: It is found to be an excellent Astringent, and is given in Form of Extract in Diarrhœas with very great Success:

CHAPTER V.

LIGNUM ALOES,
Aloes Wood.

LIGNUM ALOES is a Drug entirely different from the Gum of that Name, not only as the one is a Wood, the other a concreted Juice, but as they are the Produce of very different Parts of the World; and the one of a Tree, the other of a succulent Plant. The *Lignum Aloes* is a resinous and sweet scented Wood, of which we have three Kinds kept in the Shops. There are Authors who enumerate a great many more, but they are all, when examined, found to be referable to one or other of these. These three are distinguished by the Names of *Calambac*, common *Lignum Aloes*, and *Calambour*.

1. The *Calambac* or finest Aloes Wood, called by Authors *Lignum Aloes præstantissimum*, and by the Chinese *Sukhiang*, is the most resinous of all the Woods we are acquainted with. It is of a light spongy Texture, very porous, and its Pores so filled up with a soft and fragrant Resin, that the whole may be pressed and dented by the Fingers like Wax, or moulded about by chewing in the Mouth in the Manner of Mastich. This Kind laid on

the Fire melts in great Part like Refin, and burns away in a few Moments with a bright Flame and perfumed Smell. Its Scent while in the Mass is very fragrant and agreeable, and its Taste acrid and bitterish, but very aromatic and agreeable. This is so variable in its Colour. that some have divided it into three Kinds, the one variegated with black and purple, the second with the same black, but with yellowish instead of purple, and the third yellow alone like the Yolk of an Egg. This last is the least scented of the three; these Differences however are very trivial; the Substance being in them all the very same in every Respect except the Colour, and that often altering very considerably in keeping. This is brought from *Cochin China*.

2. The *Lignum Aloes vulgare* is the second in Value: This is called by the *Chinese Tchih Hiang*, and by the *Portuguese Pao de Aguila*. This is of a more dense and compact Texture, and consequently less resinous than the other: There is some of it however that is spongy, and has the Holes filled up with the right resinous Matter, and all of it when good has Veins of the same Refin in it. We meet with it in small Fragments, which have been cut and split from larger. These are of a tolerably dense Texture in the more solid Pieces, and of a dusky brown Colour, variegated with resinous blackish Veins. It is in this State very heavy, and less fragrant than in those Pieces which shew a Multitude of little Holes filled up with the same blackish Matter that forms the Veins in others. The woody Part of these last Pieces is somewhat darker than the other, and is not unfrequently purplish, or even blackish. The Smell of the common Aloes Wood is very agreeable, but not so strongly perfumed as the former. Its Taste is somewhat bitter and acrid, but very aromatic. Laid on the Fire, or held on a hot Iron, it does not melt away like the *Calambac*; but it exsudates a large Quantity of a fine fragrant Refin, which smells extremely sweet while it burns. This Wood is also brought from *Cochin China*, sometimes also from *Sumatra*. It is but rarely found in our Shops however, and the former or *Calambac* scarce ever at all. It bears so large a Price upon the Spot that no body ventures to bring it away.

3. The *Calambour*, or as some write it *Calambouc*, a Word approaching much nearer to *Calambac*, than the Substances expressed by them do to one another, is also called *Agallochum sylvestre*, and *Lignum Aloes Mexicanum*. This is the Wood that is most common in our Shops, though it has of all the others least Title to be so, as it has the least Virtue, and contains the least Refin of any. It is a light and friable Wood, of a dusky and often mottled Colour, between a dusky green black and a deep brown. It is less firm and solid than most of the officinal Woods. Its Smell is fragrant and agreeable, but much less sweet than that of either of the others, and its Taste bitterish, but not so much acrid or aromatic as the others. We meet with this very frequent and in large Logs, and these sometimes entire, sometimes only the Heart of the Tree, the cortical Part being separated. This is brought from the Island of *Timor*, and some other Places, and is the Aloes Wood used by the Cabinet-makers and Inlayers, but is very improperly used under the Name of *Lignum Aloes* in the Shops.

The ancient *Greeks* were acquainted with a fine fragrant Wood which they called *Agallachum*, and which, by what little they have left us about it, seems to have been the same with our *Lignum Aloes*. The later *Greeks* call it *Xyloaloe*, and

and the *Arabians* who have written more at large about it, and who evidently mean the same Wood that we do, call it *Agalugi* and *Agallugum*. The *Latin* Writers call it *Lignum Aquilæ* and *Lignum Paradisi*, some of them *Lignum sancti Crucis*. It appears that in all Times there have been different Kinds of this Wood as well as with us. But neither the Ancients nor ourselves are yet certain, whether one Tree or several produce them. It is very evident that the fine *Calambac* or most precious *Lignum Aloes* can be no Wood in its natural State; its resinous Texture denies this, as well as its Scarcity and Price. It is often sold even in the *Indies* Weight for Weight for Gold: So that a Tree of it, could such a thing be found, would be an immense Treasure. It is very certain that this is only some peculiar Part of the Tree, where the fine fragrant Refin it abounds with has concentered in such Quantity as to make up almost the whole Mass. It is said that the *Indians* find Lumps of this in the Bodies of the *Lignum Aloes* Trees, which have stood till they naturally decayed on the Mountains, and that in this State, when the Wood in general is rotten, there are found small Congeries of the resinous Matter called *Calambac* about the Knots and near the Root. Whether the Tree which in its rotting State affords this precious Kind (supposing this to be a Fact) be the same which in its sounder Condition gives us the *Lignum Aloes* of the second Kind is not yet ascertained, though it appears very probable, the Smell being the same in both; and some of the spongy Pieces of the second, which often have the real Appearance of Decay, and yet are the richest in Refin, and consequently in Fragrance of all, seem to confirm this Opinion, and even to shew us something like a beginning Change of the common *Lignum Aloes* into the fine *Calambac*. As to the third or wild Kind, it so much differs from them both, that it seems to have little more than the Name in common with them. There have been Authors who have told us, that these three are the Produce of three very different Trees; but the more probable Opinion is, that this wild *Lignum Aloes* is the Wood of a different Tree, the two others of the same, only in two different States. Our Countryman *Cunningham* tells us, that one Kind has a large woolly Fruit of the Size of the yellow Myrabolon, standing in a Cup divided into five Segments at the Edge, and when ripe opening into two Parts, and containing in each Part one Seed of a turbinated Form, and ornamented with a membranaceous Appendage; and that the other has a small round Fruit like Pepper. He makes the first the Tree which produces the *Calambac*, the other the common *Lignum Aloes*: But it is more probably, as before observed, the Distinction between the *Lignum Aloes* Tree and the *Calambour* or wild *Lignum Aloes*. *Bontius* tells us that the common *Lignum Aloes* is only the Heart of the Tree which produces it, and that the *Indians* who cut it, lay it in Water till the Bark and softer Parts rot off. *Serapio* and the other *Arabians* had said this before him; but we hope he has better Authority than their Words for it, their Accounts of such Things seeming to have been received upon very uncertain Footings. We have no tolerable Description of the Tree which produces one or the other Kind. The Figures the *Chinese* have of it in their Herbals, express it as a large Tree, or the Trunk of a Tree decaying, with a Branch of pinnated Leaves, each single Leaf resembling those of the Bay Tree. *Cunningham's* Description of the Fruit is the only one we have; and all we know of the Leaves with any Degree of Certainty, is from *Kempfer* in his *Amenitates Exoticæ*,

tica, who tells us that he received a small Piece of it from the Mountains, on which the Leaves stood alternately at about an Inch Distance, and were in Shape like those of our Peach Tree, divided at the Edges, of a bright green Colour on both Sides, and had a large middle Rib, and only very small lateral ones issuing from it.

The *Indians* use the *Calambac* by Way of Incense, burning small Pieces of it in the Temples of their Gods; and sometimes their great People burn it in their Houses in Times of feasting. It is esteemed a Cordial taken internally, and they sometimes give it in Disorders of the Stomach and Bowels, and to destroy Worms. It has also the Credit of being a great thing for preserving and strengthening the Memory. A very fragrant Oil may be procured from it by Distillation, which is recommended in paralytic Cases, from five to fifteen Drops. It is at present however but little used, and would scarce be met with any where in the Shops, but that it is an Ingredient in some of the old Compositions.

We are told in the Philosophical Transactions, that the Tree while growing abounds with a milky Juice of so acrid and caustic a Nature, that if it gets into the Eyes it will occasion Blindness, and if it only fall on any Part of the Skin, it will raise Blisters. If this be a Fact, perhaps there would require some Caution in the internal Use of the true resinous Wood of this Name; but as to the common one we meet with, there does not seem to be much to be dreaded in that.

CHAPTER VI.

LIGNUM RHODIUM,

Rose Wood.

THE Rose Wood of the Shops is a dense and compact Wood: We meet with it in large Pieces which seldom are entire; they are usually Pieces split from larger Masses, and often appear to be Parts of Blocks, which, when entire, must have been of a very considerable Size. It is of a dusky yellowish Colour, sometimes variegated with a deep reddish brown, and sometimes with a pale whitish Colour; and some Pieces of it are solely of this whitish or brownish Cast. In the Pieces that we meet with most entire the external Part is usually the paler, and that nearest the Heart darkest; in these we also discover that the Tree it is cut from is knotty, and the Grain seldom runs any thing regularly, but usually there are several Turnings and Convolutions, in the Center of which there are sometimes Clusters of circular Fibres, where there is a fine fragrant Resin. This also appears to be the Case with the other fragrant and precious Wood the *Lignum Aloes*; and that most esteemed and rare Kind of it called *Calambac*, seems to be only these Knots or Clusters of Fibres highly impregnated with the Resin of the Tree, and separated from it, either while entire, or when the less resinous Part of the Trunk is decaying. In the same Manner these Knots of the *Rhodium* are also greatly preferable to the Rest for distilling and for all other Purposes. The whole however smells very fragrant when fresh cut; its Perfume is not much unlike that of the Rose. Its Taste is somewhat aromatic and subastringent.

Rose Wood is to be chosen sound, heavy, and firm, of the deepest Colour that may be, and of the most irregular Grain and fullest of Knots and Contortions. We are not yet informed with any Degree of Certainty, what the Tree is which affords the true *Rhodian* Wood of *Rhodes* and *Cyprus*, which are the Places whence the best and finest has always been brought. *Anguillara* and *Matthioli* imagine it a Kind of *Oleaster*, *Honorius Bellus* contradicts them, and declares it to be a Kind of *Cytisus*, the *Cytisus incana filiqua foliata* of *Caspar Bauhine*; but he seems to err in this, as that Shrub is well known, and its Wood has no Smell. *Herman* tells us, that the *Rhodium* of the Shops is the Root of a *Cytisus* of the *Canaries*, but he does not describe the Shrub: He has so much at least of the Appearance of Truth for him, that the tortuous Course of the Fibres in our *Rhodium* seems to bespeak it a Root. What makes most against him is, that some of our Pieces of it are Parts of Segments of too large Blocks to have been the Root of so small a Shrub: Thus much is certain, that we have *Rhodium*, or at least a Wood of the Smell of *Rhodium* from the *Canaries*, as also from the *Antilles* Islands, as well as from the *East Indies* and the *Levant* Islands.

Jamaica affords a Wood which the People there call Rose Wood, and which though not the genuine *Rhodium* of the Shops, has yet much of its Smell. *Sir Hans Sloane* has very accurately described the Tree which affords this, which has a Trunk thick enough to afford the largest Segments we ever meet with of it; and possibly an Adulteration of the true *Rhodium* with this Wood, may be the true Cause of the Objection that lies against our agreeing with *Hoffman*, that the genuine *Rhodium* is the Root of a *Cytisus*: for this we always observe, that those Pieces which seem Segments of large Blocks are always less fragrant, and have fewer Contortions in their Grain than the rest. *Sir Hans Sloane* has described the Tree which produces the *Jamaica* Wood called Rose Wood under the Name of *Lauro affinis Terebinthi folio alato ligno odorato candido flore albo*. The Wood is indeed always paler by much than any of the true *Rhodium*, and while fresh is almost white. The Tree grows to twenty Feet or more in Height, and its Trunk is often two Feet in Diameter. The Leaves are pinnated, three, four, or more Pairs of *Pinnæ* stand on each Rib, and that at about half an Inch Distance from each other. The Flowers are small and white, they consist of three Petals, and they stand in Clusters; at a slight View they resemble those of Elder. The Fruit is a Berry of the Size of a Pepper Corn. Such is the Description of the sweet Wood of *Jamaica*; but it is truly of a different Nature from the genuine *Rhodium*, and probably the Tree of a wholly different Genus. The *Dutch* distil an extremely fragrant Oil from the true *Rhodium*, which is often sold under the Name of Essence of Damask Roses, whose Smell it very much emulates. We are told that the *Rhodium* Wood is a Cordial and an Astringent, but it is not used at present in the Shops.

Many Writers on these Subjects have confounded the *Lignum Rhodium* with the fragrant Wood mentioned under the Name of *Aspalathum* by the Ancients; but we have no good Grounds for such an Opinion. The *Aspalathus* of *Dioscorides*, called by the *Arabians* *Darsifaban*, is at present wholly unknown in our Shops; the few who pretend to have it, keeping under its Name Fragments of Wood of different Kinds with no Title to the Name they are preserved under. The Ancients themselves indeed do not seem at all agreed about the Meaning

meaning of the Term. *Dioscorides* recommends that *Aspalathum* as the best, which is hardest and clean'd from its Bark, he therefore evidently enough means a Wood by it; but *Galen*, in his Accounts of it, evidently shews, that what he express'd by this Name, was the Bark of a Root. *Pliny* talks of it as a Root, but he says it has the Smell of *Caster*, which is so far from a Perfume, that it seems to set his *Aspalathum* at a great Distance from all the rest: He also talks of two Kinds, the one the Produce of a large Tree, the other of a small Shrub; and adds, that one was brought from the *Indies*, the other from the Islands *Rhodes* and *Nisyros*.

The Moderns are no more agreed about what was the *Rhodium* of the Antients, then they with one another: *Ruellius* takes our *Lignum Rhodium* here described to be it; but *Sylvius* is for its being our *Lignum Aloes*; and others suppose the *Cytisus verus* to be the Shrub which produces it, thereby according to *Herman's* Conjecture, making it the same with the true *Rhodium*: Nor indeed are they much better agreed about the *Rhodium* itself; *Ruellius*, *Cordus*, and *Matthioli* describing three evidently different Woods under its Name. The Wood described in this Chapter, seems of all others to have the fairest Title to the Name of *Rhodium*, according to what the oldest Authors have said of it, and is the best *Succedaneum* we can use for the *Aspalathum* of the Antients, which is either that or a lost Medicine.

W O O D S

Less frequently used in M E D I C I N E.

C H A P T E R I.

LIGNUM NEPHRITICUM,
Nephritic Wood.

NEPHRITIC WOOD is a Wood of a very dense and compact Texture, and of a fine Grain. It is brought to us in small Blocks in its natural State, and cover'd with its Bark, which is of a dusky blackish Colour, and tolerably smooth and even; the Heart of the Logs also is of a deep dusky brown Colour, but the rest of the Wood, which is what we esteem to possess the most Virtue, and properly call *Lignum Nephriticum*, is of a pale whitish yellow, with some faint Mixture of brown; very hard and heavy, of a tolerably even Grain, and splitting very regularly; it has no great Smell, but its Taste is bitterish, and somewhat acrid.

It is to be chosen of a pale Colour, sound and firm, and such as has not lost its acrid Taste; but the surest Test of it is the infusing it in Water: A Piece of it infused only half an Hour in cold Water, gives it a changeable Colour, which is blue or yellow, as variously held to the Light. If the Vial it is in, be held between the Eye and the Light, the Tincture appears yellow, but if the Eye

be placed between the Light and the Vial it appears blue. The Addition of a little Acid of any Kind takes off the blue entirely, and the Liquor then appears yellow in all Lights; and the Addition of a fix'd volatile Alkali after this, destroys the Effect of the Acid, and the Liquor is restor'd to its changeable Colour again. We often meet with it adulterated with Woods of the same pale Colour, but the dusky blackish Hue of the Bark is our very striking Character of this. The Trial by Infusion however is the most certain, for none of the Counterfeits give the changeable Colour to Water, but only the pale yellowish.

The Tree which affords it is the *Coatli* of *Hernandez*. It grows to the Height of our Pear-Tree, and its Wood while fresh is much of the same Texture and Colour. The Leaves are small and oblong, not exceeding half an Inch in Length, or a third of an Inch in Breadth; they are not at all notched at the Edges, and are green above with a few Hairs scatter'd over them, but of a silvery grey underneath. The Flowers are small, and of a pale yellow, and oblong Shape, and they stand in Spikes; the Cups they stand in are divided into five Segments at the Edge, and are cover'd with a reddish Down. This is the best Description of the Tree that can be collected from what has hitherto been written of it; no Body has yet had an Opportunity of taking its true Character. It grows in many Parts of *New Spain*, from whence the Wood is brought to us. It is esteem'd a very good Diuretic, and is said to be in great Use with the *Indians*, in all Diseases of the Kidneys and Bladder, and in Suppressions of Urine from whatever Cause. *Hernandez* and *Monardes* likewise commend it in Fevers, and in Obstructions of the Viscera: The Way of taking it among the *Indians* is in Infusion in cold Water, they think the Virtue of the Wood sufficiently communicated to the Water, when it has acquired a good Colour from it; but it is observable, that the Water, though ever so deeply tinged by it in these cold Infusions, scarce at all alters its Taste. People subject to Disorders of the Kidneys and Bladder, either take a half Pint of this Night and Morning, or use it as their common Drink: Great things are said in its Praise by People who have been on the Spot, but we have not found it answer Expectations in *Europe*, and indeed it is now little used.

CHAPTER II.

LIGNUM COLUBRINUM, *Snake Wood.*

THE *Lignum Colubrinum* is a woody Substance, of a tolerably firm and dense Texture: We have it brought to us in Pieces, from a Foot to near twice as much in Length, and from an Inch to four or five Inches in Diameter. These are brought over in their natural State, and are cover'd with a Bark moderately thick, and of a brown Colour, variegated with Spots of whitish and greyish: The woody Matter under this is of a pale brown Colour, and of a fibrous, though compact Texture; it is very tough and hard to break, nor will it split very regularly; it has no remarkable Smell, but it is of an intensely bitter Taste. It is to be chosen in moderately large and thick Pieces, sound and heavy, and of a very bitter Taste.

It is brought to us from the Island of *Timor*, and some other Parts of the *East*, and is more properly a Root than a Wood, though so call'd; for what we receive is always the smaller, or midling Branches of the Root, not the Trunk or Arms of the Tree, the Wood of which is of a firmer Texture and less bitter.

The Tree which produces the *Lignum Colubrinum* is one of the *Arbores Pomiferae* of *Ray*. It is of the *Nux Vomica* Kind: Its Fruit resembling the common *Nux Vomica* of the Shops in all things except Size. It is described in the *Prodromus* of the *Paradisus Batavus* under the Name of *Nux Vomica Molucaana minor*, *Lignum Colubrinum officinarum*, by *Breynius* under that of *Solanum arborescens Indicum foliis napceae minoribus fructu rotundo duro et semine orbiculari compresso minoribus*: It is call'd *Scheru-katu-valli-caniram* in the *Hortus Malabaricus*, and differs only in the Leaves, Flowers, and Fruit, being smaller, from the *Caniram* of the same Authors which produces the officinal *Nux Vomica*.

Authors have been of Opinion, that this Wood, and that Fruit, were the Produce of the same Tree; but that is going too far, they are really the Produce of two Species of the same Genus. The Tree which produces the *Lignum Colubrinum* grows tall and strait, and has a number of Branches: Its Bark is of a brownish dusky Colour, its Wood paler: The Leaves are oblong, broadest in the Middle, and obtuse at the End: Its Flowers are small, and grow in Clusters at the Knots of the Stalk: Its Fruit is large, and of the Shape of a large Walnut, green at first but yellow when ripe; and in each there are about fifteen Seeds, which are exactly like the *Nux Vomica*, but not more than half as large. The smaller Branches of the Roots of this Tree are what make the *Lignum Colubrinum*: The *Indians*, who have a great Opinion of its Virtue, dig them in Autumn, cutting them carefully off so as not to hurt the Tree; they are of Opinion, that it is a certain Remedy for the Bite of the Serpent, call'd *Cobra de Capello*, or the Hooded Serpent, and from thence its Name of *Lignum Colubrinum*: It is also said to be a Remedy for Intermittents, and a Destroyer of Worms: It operates differently, as taken in a larger or smaller Dose, or according to the Strength of the Patient; sometimes by Urine, sometimes by Sweat, sometimes by Stool, and sometimes by Vomit; the last is the Case when a large Dose is given, and if a yet larger than such as produces this Effect be given, it brings on Convulsions, and sometimes proves fatal. It is never given internally till it has been kept some Years; when fresh it is too violent, and seldom fails, even in a small Dose, to bring on Convulsions, and sometimes Madness.

We very seldom use it: The few Instances that we have recorded of People's having taken it, being all such as would discourage a prudent Man from having any thing to do with it: They have been in general seiz'd with Convulsions or Deliriums.

CHAPTER III.

LIGNUM LENTISCI,
Lentisc Wood.

THE *Lignum Lentisci* is a Wood of a tolerably compact Texture: It is brought to us in long and slender Pieces, the general Standard being a Foot or two in Length, and two or three Inches in Diameter; these are rough and knotty, and are usually brought with their Bark on; the Bark is thin, and of a dusky brown Colour, with some Mixture of a silvery grey: The Wood is pale, brown, almost whitish, of a fibrous Texture, resinous, very tough and hard to break, and of a fragrant Smell somewhat like that of *Chio Turpentine*, and of an acrid and bitterish Taste. It is to be chosen sound and firm, not Worm-eaten, and of a good Smell when cut or bruised. The Tree which produces it is the same with that which affords us the Mastic, and is described under that Head. It is the *Lentiscus ex Chio Caudice et foliis fuscis* of the *Amsterdam Garden*, and is different from what is call'd the common Lentisc or Mastic Tree.

The Lentisc Wood, distill'd by the Retort, yields an acrid Phlegm in considerable Quantity, a small Portion of an urinous Phlegm, and a great deal of Oil.

It is esteem'd astringent, and balsamic, and is recommended in the *Fluor Albus*, and in Gonorrhœas, but at present it is very little used.

CHAPTER IV.

P A V A N A,
Pavan Wood.

PA V A N A or *Panava*, as it is differently written by different Authors, is a Wood of a lax and spongy Texture: We meet with it in Pieces of five or six Inches in Length, and of two or three Inches in Diameter; these are in their intire State, and are cover'd with a thin Rind, of a dusky greenish or Olive brown Colour: The woody Part is of a pale brown Colour, and is very light, somewhat tough, though pretty easy to cut; and when broken in the Hands it is found to be of a fibrous Texture; it has scarce any Smell, but is of an acrid Taste. This is its Description as we receive it dry'd, but when fresh cut it is full of a milky Juice, and of a horribly nauseous Smell. It is to be chosen in moderately large Pieces, sound and tough, and not worm-eaten.

The Plant which produces it is the same whose Seeds are the *Grana tiglia* of the Shops: The Part of it which is cut for medicinal Use is generally the small Part of the Tree, near the Part where the Spike of Flowers issues out, but sometimes the larger Part of the Tree split is sent to us.

It is one of the *Herbæ flore imperfecto sive stamineo* of Mr. Ray. It is described by the Name of *Cadel Avenacu* in the *Hortus Malabaricus*, and by *Caspar Baubine* under that of *Lignum Molunense foliis malvæ fructu avellanæ minore cortice molliore et nigricante Pavana incolis*. It consists of a single Stem, with a few

few Leaves near the Top, and a Spike of Flowers rising from the Center of them. Its Seeds are the *Grana tiglia* describ'd in their Place. The *Pavana* Wood when fresh operates very violently, both by Vomit and Stool, and is so acrid that it generally leaves an Inflammation in the *Anus* after its Operation. When dry'd it operates much more gently, it never vomits at all, purges but very gently, and sometimes operates only by Sweat. It is by many recommended as a Specific in some chronic Diseases, but at present so little Regard is paid to their Accounts, that it is scarce so much as heard of in the Shops.

PARTS of VEGETABLES

Used in MEDICINE.

CLASS the TENTH.

EXCRESCENCES.

A Want of Knowledge in natural History, and an over Credulity in the imaginary Virtues of some uncommon Appearances on Vegetables, had once establish'd the Class of vegetable Excrecences used in Medicine, as a very numerous one ; but in these more enlightened Times, *Kermes*, and some other of the Bodies, then call'd vegetable Excrecences, are known to be Animals ; and the Virtues of some others, really of the vegetable Tribe, are found to be imaginary ; so that the whole Class, once so numerous, is reduced to a single Species, the Galls of the Shops.

CHAPTER I.

GALLÆ,
Galls.

GALLS are a kind of preternatural and accidental Tumors, produced by the Punctures of Insects, on the Oaks of several Species. Other Trees are liable to the same Accident, and produce Galls of various Forms and Sizes, but those of the Oak only are used in Medicine.

We have two Kinds of Galls in the Shops, distinguish'd, according to the Part of the World whence they are brought, into *Oriental* and *European*.

What are call'd the *Oriental* Galls are brought from *Aleppo* : They are of the Bigness of a large Nutmeg, but not of its oblong Figure but round, and have usually

usually a considerable number of Tubercles rising on their Surface, broad at the Base, and terminating in a Point; they are of a very firm and solid Texture, hard to break, very heavy, and of a whitish, a pale brown, a bluish, or sometimes of a blackish Colour; when broken they are somewhat paler colour'd usually than on the Surface, and are of a dense and compact Texture, resinous, and of an acerb and very astringent Taste, not at all agreeable.

The *European* Galls are more perfectly round than the *Aleppo* ones, they are of the same Size, and have perfectly smooth Surfaces without any Protuberances; they are of a pale whitish or brownish Colour, very light, easily broken, and often spongy, and cavernous within, always of a lax Texture; they are of a much less austere Taste, and of much less Value, both in the Manufactures and in Medicine. The Antients were acquainted with both the Kinds as well as we, they call the *Aleppo* Galls *Omphacitæ*, and the others *Onocitæ*: They call them in general *Cerides*, and were as well acquainted with their Virtues as we are at this Time.

It has been observed, that the Oak does not produce Galls in cold Countries, more properly speaking, it should be only said, that the medicinal Galls are not produced on it in such Places, for all those Excrescences which we find in such Numbers and Variety, on this Tree in our own Woods, and call Oak-Apples, Oak-Grapes, and Oak-Cones, are true and genuine Galls, though less firm in their Texture, and less fit for Use than the harder ones of *Aleppo*. The soft and spongy *European* Galls, described above as an inferior Kind to the *Aleppo* ones, are common on the Oaks in *France* and *Italy*, and are of a middle Kind between our tender and succulent ones, and the very hard ones of *Aleppo*.

The true Reason of those hard ones not being produced with us, seems to be, that we want the peculiar Species of Insect to which they owe their Origin, which is a Fly of the *Ichneumon* Kind, only found in the hot Countries. The Species that occasions by its Punctures the soft Galls of *France* and *Italy*, is different both from the *Syrian* one and from ours, though still of the *Ichneumon* Kind; and we find, that the several Kinds which occasion the different Galls in our own Kingdom, produce different Kinds, and those of different Degrees of Hardness on the same Tree.

The general History of the Galls is this, an Insect of the Fly Kind is instructed by Nature to take Care for the Safety of her Young, by lodging her Egg where it will be defended from all Injuries, by a woody Matter forming a Case about it: She wounds the Branches of the Tree; and the lacerated Vessels, discharging their Contents, soon form this Tumor about the Hole she had made and deposited her Egg in.

Thus, though preternatural and accidental to the Tree, these Tumors are regular Productions according to their destin'd Causes, serving for the Food and Defence of the tender Maggot, produced from the Egg of the Fly, which remains quietly in them while in that State, and passes its Time of Rest in the *Chrysalis* Form also in them; but as soon as it is perfect and in its winged State, gnaws its Way out.

The Hole, through which the Fly has made its Way, may always be found in those Galls which have remained long enough on the Tree for the necessary Changes to happen to the Animal; when there is no such Hole found on the Surface,

Surface, the Maggot or its Remains are sure to be found within on breaking it. Sometimes only one Maggot is lodged in the Gall, sometimes there are several lodged in so many different Cells. If there be any Insect found in the Gall, when there is also a Hole in the Surface, it can only be one that has by Accident made its Way in there, for the Fly, whose Maggot was its proper Inhabitant, always escapes at the Hole: Indeed in those Galls where there are several Cells, there may be Insects found in some of them, though there be a Hole by which the Inhabitant of some one has escaped.

A Pound of dry *Aleppo* Galls, distil'd by the Retort, yields first near three Ounces of a yellowish Liquor of a subacid Taste; after this comes over about an Ounce and a quarter of a brownish acid Liquor, somewhat empyreumatic; after this about two Ounces and a half of a brown empyreumatic Liquor, very acrid, and of a mix'd saline, acid, and urinous alkaline Taste; and finally, about half an Ounce of a thick, black, and somewhat fetid Oil. The Remainder in the Retort, calcined and lixiviated, yields near a Dram and half of an acrid alkaline fix'd Salt.

Galls put in a very small Quantity into a Solution of Vitriol in Water, tho' but a very weak one, give it a purple or violet Colour; which, as it grows stronger, becomes black, and on this depends our writing Ink, as also a great deal of the Art of dying and dressing Leather, and many other of the Manufactures.

In Medicine, Galls are found to be very astringent, and good under proper Management in Diarrhœas, Dysenteries, and Hæmorrhages of all Kinds. They have also a very eminent Virtue as a Febrifuge: Half a Dram or more of the Powder of *Aleppo* Galls, may be given for a Dose, and will often cure an Intermittent. They are also used externally as a Strengthner and Astringent, a Decoction of them is apply'd with Success, by way of Fomentation, in *Pro-cidentie* of the *Anus*, and has been injected in the *Fluor Albus*, with very great Success.



VEGETABLE PRODUCTIONS

Used in M E D I C I N E.

TH E Bodies of this Denomination are very numerous: They may be conveniently arrang'd under two general Divisions, the natural and the artificial.

I.

Natural vegetable Productions.

These are such as flow from Trees and Plants, either absolutely spontaneous, or by means of Slits and Wounds made in their Bark, and other Parts.

Of these there are four distinct Classes.

1. The LIQUID RESINS.
2. The SOLID RESINS.
3. The GUMS.
4. The GUM RESINS.

II.

Artificial vegetable Productions.

These are such as are prepar'd from Trees and Plants by Art.

There are two Classes of them.

1. INSPISSATED JUICES.
2. SALTS.

N A T U R A L

Natural vegetable Productions

Used in MEDICINE.

CLASS the FIRST.

LIQUID RESINS.

THE Bodies of this Class, though of great Value in Medicine, are only seven in number.

1. BALM of GILEAD.
2. BALSAM of PERU.
3. BALSAM of TOLU.
4. BALSAM CAPIVI.

5. TURPENTINE.
6. LIQUID AMBAR.
7. LIQUID STORAX.

CHAPTER I.

BALSAMUM JUDAICUM,
Balm of Gilead.

THE true *Balsamum Judaicum*, or as we more frequently call it, *Balm of Gilead*, is a thin and transparent resinous Juice: It is of a pale yellowish Colour, between what we call Straw Colour and that of Lemon-Peel; it sometimes however varies from this, and is either deeper, or almost entirely white; its Consistence is yet less stable or fix'd than its Colour; it is, when fresh drawn from the Tree, very little thicker than common Oil, but it by Degrees grows more and more thick in keeping; it is of a tough and viscous Nature like Turpentine, and is of an extremely fragrant Smell, with an Admixture of somewhat of the Citron Flavour in it; its Taste is acrid and bitterish, but very agreeable. It is always best when thinnest, provided it be genuine; for as it acquires a thicker Consistence by keeping, it generally loses its Fragrance and Virtue in proportion.

It is therefore to be chosen fluid as Oil, of a very pale yellow Colour, perfectly transparent, and of a fragrant Smell, with somewhat of the Lemon or Citron Flavour, but not too much of it; for the Druggists, who know this sort of Flavour is expected in it, and who can easily give it to any Sophistication they sell under its Name, by a few Drops of Essence of Lemons, often make their Counterfeits discover themselves by too much of this Smell.

The Balsam of *Judea* has been long known in Medicine, the old *Greeks* speak of it under the Name of *Opobalsamum*, and all the after Writers under those of *Balsamum Syriacum*, *e Mecha*, *Constantinopolitanum*, *Judaicum*, *Gileadense*, and *Balsamelcon*.

The Shrub which produces it is described by Authors under the Name of *Balsamum verum* and *Balsamum Syriacum Rutæ folio*, the Rue leaved Syrian Balsam Tree. It grows to five or six Feet high. Its Leaves are resembled to those of Rue by Authors, but they are rather like those of the Lentisk Tree; they are of the pinnated Kind, three or four Pairs of little roundish Leaves growing to a middle Rib, with an odd Leaf at the End. These Leaves remain green all the Winter: The Twigs or small Branches of the Shrub are tough like those of the Willow, and when broken are of a very fragrant Smell. The Bark of the whole Shrub also is scented, but the Wood of the larger Branches is white and has no Smell. The Flowers resemble those of the *Acacia*, and are of a purplish white, and extremely fragrant. The Seeds are yellow and small, and are inclosed in blackish membranaceous Capsules, and are very sweet scented, and of an acrid and bitterish Taste.

The ancients supposed *Judæa* to be the native Place of the Balsam Shrub: *Theophrastus*, *Dioscorides*, and *Pliny* all join in affirming it. *Theophrastus* indeed is of Opinion that it was not wild there, nor indeed in any other known Part of the World, but that it was cultivated for the Sake of its Balsam. *Dioscorides* on the other Hand tells us, that it grew wild not only in *Judæa*, but in *Ægypt* also; and *Strabo* speaks of it as wild in *Arabia*. At present it is not found in any of the Places Authors mention; but is only cultivated in some Gardens by the *Turks*, particularly about *Cairo*, where they are at great Expence about it. They all agree that it was brought originally from *Arabia*; and indeed the most authentic Accounts we have, all join in fixing *Arabia Felix* as its true native Soil.

Prosper Alpinus, who had seen the *Balsam Judaicum* on the Spot, tells us that it is, when first drawn from the Shrub, of a whitish Colour, and of an extremely fragrant and penetrating Smell, somewhat resembling the Turpentine Odour, but without its disagreeable Part, and that its Taste is acrid, bitter, and astringent. He adds, that it is at that Time turbid like Oil newly pressed from the Olives; but that after a little standing it becomes perfectly transparent and fine, and very thin and light; that its Colour from the original white, first becomes greenish, and afterwards a yellowish or straw Colour. This is the State in which we ought to receive it for medicinal Use; after this it becomes as thick as Turpentine, and loses the greater Part of its Smell and of its Virtues. The Ancients knew but of one Way of obtaining the Balsam from the Shrub, which was by wounding the Bark, and receiving it as it ran from the Wounds; this Way they obtained a very fine Balsam, but they could have it only in very small Quantity. At present there are three Ways of obtaining it, and according to these, there are three Kinds of the Balsam. The first Kind is that obtained from the natural Cracks, or from Wounds made in the Bark, as by the Ancients; this is the best and most precious Kind. But there is so little procured this Way, that it scarce supplies the Seraglio and the great Officers, and hardly a Drop of it is ever sent out of the Country. The second Kind is called by some, the *Constantinople* Balsam; this also rarely comes to us, unless in small Quantities presented by the great Men of the Porte: This is prepared by boiling. They fill large Vessels with the young Twigs, and Leaves of the Balsam Shrub, and adding a large Quantity of Water, they boil them gently. During the boiling, there rises to the Surface of the Liquor, an oily and

and balsamic Matter, which they scum off and preserve for Use. After all this fine Matter is raised, they encrease the Fire, and a larger Quantity of a somewhat thicker Balsam rises, more like Turpentine; this they also separate, and preserve by itself; and this is principally what is brought over into *Europe*.

The *Balsamum Judaicum*, distilled by the Retort, yields a large Portion of a fine light and fragrant essential Oil, leaving behind it in the Retort a Cake of Matter like Refin. If the Fire is continued there arises afterwards a thick reddish and stinking Oil as from Turpentine, and a few Drops of an acid Spirit.

The *Balsamum Judaicum* is a great Cordial, Restorative, and Provocative, according to the Testimony of Authors; and we have many who are continually taking it with that Intent. It is also recommended by many against malignant Fevers and the Bites of venomous Animals. The People of *Ægypt* look on it as a Kind of universal Remedy; they give it in all Diseases of whatever Kind, the Plague itself not excepted; and they tell us of many cured of that terrible Distemper by it.

It is unquestionably a very noble Detergent and Balsamic: It is of the same Use with *Capivi* in Gonorrhœas, and is excellent in Ulcers of the Kidneys and Bladder. It is by some esteemed a Cure for Consumptions, and though it deserve not absolutely that Title, yet with proper Management it may do great Service in them. Externally it has been at all Times deservedly famous for curing Wounds of all Kinds: Where the Wound is indeed a simple Solution of Continuity, and there is no Bruise with it, the Cure with Balsams of this Kind is very sudden.

For internal Use it may be either given in Bolusses, or dropped on Sugar, or finally dissolved by Means of the Yolk of an Egg into Emulsions. The *Turkish* Women use the Balsam of *Gilead* as a Cosmetic: They are made hot in the Baths, and then rubbed over with it several Times; after which it is in fine taken off by Means of Oil of Almonds and a careful Washing. They often stay however twenty or thirty Days from the first anointing, before they clear it off; and they are of Opinion that their Skins become much less apt to wrinkle after this. We sometimes also order it as a Cosmetic: But with us it is made into a Kind of *Lac Virginis*, by mixing the Balsam with Spirit of Wine, by means of Oil of sweet Almonds, which is afterwards to be separated by Subsidence, and a Spoonful of this impregnated Spirit, then mixed with four Ounces of Water renders it milky.

C H A P T E R II.

BALSAMUM PERUVIANUM, *Balsam of Peru.*

THE common Balsam of *Peru* is a thick and tough Liquor, resembling a thin Turpentine in Consistence, but somewhat less viscous; resinous, and inflammable, of a dark dusky purplish green Colour, approaching to black, insomuch that it is called black Balsam of *Peru*. It is not pellucid except when drawn out into fine Threads. Its Smell is extremely fragrant, somewhat resembling that of *Benjamin* and the Balsam of *Tolu* mixt. Its Taste is very acrid and pungent, but highly aromatic and agreeable. It Smell while burning is also very agreeable.

It is to be chosen of a moderate Consistence, not too thick, and not too deep or black in Colour; such also as has an empyreumatic Smell is to be rejected. It is brought to us from the Place whose Name it bears, and from some other Parts of *South America*.

The Tree which produces it is described by *Marcgrave* under the Name of *Cabui Iba*, and by *Piso* under that of *Cabureiba sive Balsamum Peruvianum*, and by *Hernandez* under that of *Hoitziloxitl seu Arbor Balsami Indici Balsamifera prima*. It grows to seven or eight Feet high in Form of a Shrub, much branched from the Bottom; its Leaves resemble those of the Almond Tree, but that they are broader and more pointed. The Flowers stand on the Summit of the Branches, they are yellow, and are succeeded by crooked Seeds.

The black *Peruvian* Balsam is obtained from this Tree by boiling in the same Manner as the ordinary Balm of *Gilead* is from its Shrub. They cut the Branches, Leaves, &c. into small Fragments, and throw them into a large Vessel of Water, in which they boil them several Hours. They then let all cool, and the next Day they skim off with a Spoon a fatty Liquor which floats on the Surface of the Decoction. This they preserve and send into *Europe*, under the Name of Balsam of *Peru*.

The Virtues of this Balsam as a Cordial, a Pectoral, and a Diuretic are very great. It is given with Success from four to eight Drops for a Dose in Consumptions, Asthmas, nephritic Complaints, and in Obstructions of the *Viscera*, and Suppressions of the Menses. It has also, externally used, all the Virtues of the Balm of *Gilead*, and consolidates Wounds in the same remarkable Manner. It is best taken dropped on Sugar; the Yolk of an Egg will indeed dissolve it, and it may be that Way made into an Emulsion, but it is more acrid in that Form than when taken singly. It is often made an Ingredient in Bolusses and Electuaries and is in some of the officinal Compositions.

BALSAMUM PERUVIANUM ALBUM,

White Balsam of Peru.

The white Balsam of *Peru*, a Drug whose Virtues make it a Misfortune to us that it is not more common in the Shops, is a Liquid of a white Colour, the most of all Things, in its external Appearance, approaches to the Balm of *Gilead*, but is easily distinguished from it by its Smell: It also wants that Cast of yellow which the genuine Balm of *Gilead* has. It is a little more fluid than *Venice* Turpentine, but somewhat less so than the black Balsam of the same Name. It is very tough and viscous to the Touch, of a pale white Colour, sometimes with a faint Kind of Yellowness in it, very clear and pellucid, and extremely inflammable, yielding a very fragrant Scent while burning. It is of a very pleasant brisk Scent, more resembling that of Storax than of any other known Substance. It is acrid, pungent and bitterish to the Taste, and leaves a remarkably agreeable Flavour for a long Time in the Mouth. It is brought to us from the same Places with the black Balsam of the same Name, and is the Produce of the same Tree; but as the other is procured by boiling, this white Kind flows from the Trunk and Branches of the Shrub when wounded in the hotter Months. This is therefore much more scarce even on the Spot, and consequently would be much dearer if commonly imported to us; but its superior Virtues would make Amends for the Difference. *Herman*, who had experimented upon this scarce and valuable Drug, tells us,

that on Distillation in a Retort, it yields a fine, thin, and fragrant Oil, which almost immediately concretes into a solid Substance like Camphire, of a fine white Colour and pungent agreeable Smell. This has all the Virtues of the Balsam itself given in a smaller Dose. The Balsam used in its natural State is said to possess the Virtues of the Balm of *Gilead*, and to be no Way inferior to that precious Drug. The *Indians* take it for all Diseases of the Breast, and it is their grand Remedy externally used for Wounds.

C H A P T E R III.

BALSAMUM TOLUTANUM,
Balsam of Tolu.

BALSAM of *Tolu* is a Resin that scarce allows itself in the Condition in which we see it to be of the fluid Kind. It runs very thin for some time after it is collected, however by Degrees it grows more and more thick, till after some Years keeping it becomes almost solid. The Consistence we usually see it of, is that of very thick Honey, which will just alter its Form on moving the Vessel it is kept in: It is very tough and viscous, and in Colour is of a ruddy brown with an Admixture of yellow, which discovers itself much the most plainly when the Balsam is drawn into Threads. Its Smell is very fragrant. It seems to carry a mixed Resemblance of Benjamin, Storax, and Balm of *Gilead*, for there is evidently somewhat even of the fine Citron Flavour of the last in it. It is somewhat acrid to the Taste, but upon the whole sweetish, aromatic, and very pleasant. It is brought from the Province of *Honduras* in new *Spain*. The *Indians* call this Part of the Country *Tolu*, and thence the Name originally given to the Drug which it yet retains.

They put it up in Calabashes or Shells of small Gourds, and we receive it in them. It is to be chosen fresh, which may be known by its Consistence, for such as is dry solid, and friable, has always been kept too long; it should be at least capable of receiving an Impression from the Finger, and of a very fragrant Smell, and such as does not break in the Mouth, but forms itself into a tough Paste like Mastich between the Teeth.

The Tree which produces the Balsam of *Tolu* is one of the *Arbores fructu a flore remoto coniferæ* of Ray. It is described by *Hernandez* but imperfectly under the Name of *Balsamifera Quarta*. All we at present know of it is, that it is a low Tree resembling the common Pine, that is very much branched, and has oblong and narrow Leaves which are green all the Winter. The *Indians* cut and wound the Bark of the Trunk and Branches of this Tree in the hottest Seasons, and collect the Balsam that flows during the Heat of the Day, from the Wounds, with small Spoons, from which they empty it into those Shells we see it in.

The Virtues of the Balsam of *Tolu* are the same in general with those of the *Peruvian* and *Gilead* Kinds; but it is less acrid, and therefore is preferred by many to both of them. It is given in Consumptions and other Disorders of the Breast, sometimes in Form of Pills, sometimes of Electuary; but as it has not the Pungency of the other Kinds, the best Form of giving it is in
Emulsion

Emulsion dissolved with the Yolk of an Egg, and so mixed with Water. The Syrup called *Syrupus Balsamicus* in the Shops is made of this Balsam boiled in Water in a close Vessel, and the Decoction thickened into a Syrup with fine Sugar.

C H A P T E R IV.

BALSAMUM CAPIVI,

Balsam Capivi.

WE are obliged to the new World for most of the liquid Refins which we have brought into Use in Medicine. This called Capivi is in its common State the thinnest of all the Bodies of this Class, having little more than the Consistence of Sallad Oil, and much resembling it in its pale yellow Colour. It does not always however retain this thin Form, but like the rest of the liquid Refins grows thicker with keeping. Its Smell is very fragrant and agreeable; there is much of the Turpentine Flavour indeed in it, but there is a Mixture of Fragrancy not unlike that of the *Lignum Aloes*, which makes it very pleasing: Its Taste is extremely acrid, pungent, and bitter. It is to be observed however, that we have two Kinds of Balsam Capivi in the Shops, the one what has been just described, which though naturally thin as Oil, yet will grow thick as Honey in keeping, but still distinguishes itself by its Clearness and its yellow Colour. The other we seldom meet with otherwise than very thick; it is white, turbid, or less pellucid than the former, and seems rather of the Consistence of Honey than of Turpentine. Its Taste however is very like that of Turpentine, and its Smell much less agreeable than that of the preceding Kind. In keeping of this Kind we often see a small Quantity of Water separated from it, and subside to the Bottom of the Vessel. It is probable that this is not the natural Running of the Capivi Tree, as the former is, but is procured from it by the *Indians* by boiling as they get the black Balsam of *Peru*.

The *Portuguese* were the first who made us acquainted with this Balsam; They brought it from the *Brasils*, whence the greatest Part of what we have at this Time also comes, and called it *Balsamum Brasiliense*, and *Balsamum Copaiba*, *Copaiva*, *Copaic*, and *Capivi*; all which Names it yet retains with that of *Oleum Capivi* by some, because of its Fluidity.

The Tree which produces it is one of *Arbores siliquosæ flore uniformi* of Mr. Ray. It is described by *Piso* and *Marcgrave* under the Name of *Copaiba*, and by Ray in his History of Plants, under that of *Arbor balsamifera Brasiliensis fructu monospermo*. It is a large and tall Tree. Its Wood is as sound and firm as that of the Beach, and is of a fine red Colour; it is much branched; its Leaves are roundish, but pointed at the End, of a deep green on the upper Side, and of a whitish green underneath. The Flowers are of the pentapetalous Kind, and moderately large, they grow principally about the Extremities of the Branches, and are succeeded by Pods of an oblong Figure, containing each only one Seed, which is of the Size and Shape of a Hazel Nut, consisting of a whitish pulpy Matter covered with a blackish Rind. These Seeds are esculent, and the Monkeys are observed to be very fond of them. The Tree
grows

grows in the Forests of the *Brasils*, and in some of those of the *Antilles* Islands. They cut deep into it in the Heats of Summer, and it bleeds so freely of this resinous Juice, that twelve Pounds of it may sometimes be collected from one Wound properly made in the Space of three or four Hours. The Balsam that runs first is thinnest, and is preserved apart as most valuable.

Balsam of Capivi, distilled in an Alembic, with a large Quantity of Water, yields an Oil like that of Turpentine, but more fragrant, and a Water highly scented with the Balsam, and tasting strongly of it. The Remainder swims on the Liquor in the Body of the Still, and is scarce distinguishable from boiled Turpentine. Distilled by the Retort it yields a fine essential Oil, and a large Portion of an acid Liquor, and after this a red thick empyreumatic Oil which becomes brown as the Fire is more encreased. The Remainder in the Retort is a light black Coal, which will not yield any Salt on Lixiviation.

It is remarkable of Capivi, that when pure, it does not give the Urine of People who take it the fine Violet Scent that is perceived in it after taking Turpentine of any Kind; but it communicates a remarkable Bitterness to it. It is a great Balsamic and Vulnerary, both internally and externally, and has an Astringency that the other liquid Resins want. It stops the *Fluor Albus* in Women, and the Gleets remaining after the Cure of Gonorrhœas in Men. It is good in Dysenteries and other Fluxes of the Belly. It gives Relief in nephritic Complaints of all Kinds, promoting the Discharge by Urine, and sheathing the Acrimony of the Salts of that Secretion, and bringing away Gravel or any other Foulnesses in the Passages. It is to be given from ten to thirty or forty Drops for a Dose, either in Sugar or in a poached Egg, or made up into Emulsion. But great Caution is to be used in giving it in Gonorrhœas, that the Virulence is all carried off first.

CHAPTER V.

TEREBINTHINA, *Turpentine.*

TURPENTINE is truly and properly the Name of that soft Resin only, which is the Produce of the *Terebinthus* or Turpentine Tree. This is what we know in the Shops at this time under the Name of *Terebinthina Chia*, an additional Epithet given it from the Name of the Island whence we have it. People have observed however that the Fluid or soft Resins of many other Trees, quite different in Genus and Class from the *Terebinthus*, much resemble this Turpentine in many Particulars, and have therefore called them by the same general Name, distinguishing them only by Epithets. According to this Custom of the World we are to observe, that we have at this Time four Kinds of *Terebinthina* in the Shops. These are 1. The *Chian*, or as we usually call it *Chio* Turpentine. 2. The *Venetian* or *Venice* Turpentine. 3. The *Straßburgh* Turpentine. And 4. The coarse or common Turpentine.

TEREBINTHINA CHIA, *Chian Turpentine.*

This is the finest Turpentine we are acquainted with, and is the Turpentine of the Ancients: It is this Species that they always mean, when they speak

of *Resina Terebinthina*, and that the *Arabians* after them express by the Terms *Hele Alimbath* or *Hele Alimbath*. It is when genuine (for we too frequently meet with it counterfeited in the Shops) a soft rather than a fluid Resin. Its Consistence when newest is seldom thinner than that of thick Honey, and in keeping it grows harder, but a long Time retains however Softness enough to give Way easily under the Finger. Its Colour is a silvery white with a Tinge of blueish, and a stronger of yellow, so that on the whole, in many Lights it looks green. It is very pure and fine, tolerably pellucid when viewed against the Light in not too large Quantities, and is extremely viscous, sticking more firmly to the Fingers when it has once Hold than any other Turpentine. Its Smell is indeed of the Turpentine Kind, but it has an aromatic Fragrancy that the common Kinds want, in which it approaches much to the white Balm of *Peru*, or in some Degree to the genuine Balm of *Gilead*. Its Taste is somewhat acrid and pungent, but it has a very agreeable aromatic Bitter attending it in the Mouth.

It is to be chosen of a moderately solid Consistence, very glutinous and very fragrant when burnt: Its Colour is also a very great Test. It is often counterfeited in *London* at the Turpentine Houses; but its real mixed Colour is not easily hit. We have it from the Islands of *Chio* and *Cyprus*; some have supposed the Turpentine of these two Islands to be different, but that is erroneous; all that is brought from both is wholly the same, and there is also some of it from *Rhodes*.

The Tree which produces it is one of the *Diæcia Pentandria* of *Linnaeus*, and one of the *Arbores flore à fructu remoto* of *Ray*. It is described by all the botanical Authors under the Name of *Terebinthus*, or the Turpentine Tree. It grows to the Size of our ordinary Plum Trees, and its Leaves remain green all the Winter. They are rigid and firm, and of the pinnated Kind. The Flowers are small, purple, and of the staminate Kind; they appear on the Tops of the Branches in the Month of *May*. The Fruit is roundish, and consists of a yellowish or purplish membranaceous Husk a Quarter of an Inch long, and of an acid and resinous Taste, containing a single Kernel, and often none at all. It is found wild in some Parts of *France*, *Spain*, and *Italy*, but in the Island of *Chio* it is the commonest Tree met with, and in Summer spontaneously exudates a vast Quantity of this greenish looking Resin which is collected for Use, but is much less fragrant at first than after keeping. They also promote the Discharge of this valuable Matter by wounding the Trunk and Branches in convenient Places.

There is a Species of *Puceron* or small Animal, of the Kind of those little green Insects which we see in Clusters about the Stalks of Elder, and other Shrubs and Plants, which vastly admires the Turpentine Tree. It makes its Way under the Integuments of a Leaf or young Shoot, and there deposits its young. Nature furnishes them a large and spacious Lodging; for the wounded Part rises into a Kind of Gall or Tubercle which sometimes grows to the Length and Thickness of a Finger. This is what is called the Horn of the Turpentine Tree, the Origin of which has been very differently guessed at by Authors.

The *Turks* and *Persians* have a Resin which is sold in all their Shops, and is used as a Masticatory under the Name of *Sakkis* and *Kouderum*. The Women have a Piece of it always in their Mouths, and are continually chewing it: They

they say it makes the Teeth white, and fastens them in the Gums, and prevents Catarrhs by the Quantity of *Saliva* drawn into the Mouth by it; they add also, that it gives them an Appetite, and sweetens the Breath: This *Sakkis* of the *Turks* is a firm Resin, of about the Consistence of *Burgundy* Pitch, and of a pale Colour. *Kempfer* has let us so far into the History of this, as to inform us, that the *Persians*, &c. gather it from a Kind of wild Turpentine Tree, so that it is in Reality no other than *Chio* Turpentine, only that they do not use it crude, but melt it over the Fire, keeping it there a little while, till on cooling it acquires the Consistence they would have it of, which is just such as is above, receiving an Impression from the Finger.

In some other Parts of the *East* they procure a Kind of brown Resin from this Tree by burning the Wood, and receiving the Resin as it flows out, but this is vastly inferior, in all its Qualities, to the natural Resin. *Chio* Turpentine, distil'd in a Retort, yields first about a fifth Part of its Weight, of a thin, limpid, and colourless Oil like Water; then more than half this Quantity of a yellow clear Oil; and after this, more than twice the Quantity of the first, of a thick coarse Oil of a reddish brown Colour, and about twenty Drops, or less, of an acid Liquor, from the Pound of Turpentine. The Remainder in the Retort is then a black Coal, from which all the Calcination and Lixivation in the World will never produce a single Grain of Salt, which is the Case also with many other of the Resins.

Chio Turpentine is less acrid than any other Kind, and is therefore to be prefer'd to all the others on many Occasions for internal Use. It is a very great Detergent and Balsamic. It is good in Coughs, and beginning Consumptions, and in all Exulcerations of the Lungs, or other Viscera. It is a powerful Diuretic, and like the other Turpentine gives a Violet Scent to the Urine. It is good in nephritic Cases, and in the *Fluor Albus*, and Gonorrhœas, but in the last Case it must be given with Caution. It is also said to be good in the Gout and Rheumatism, and the antient *Greeks* gave it in large Doses as a Purge. It is an Ingredient in many of the old Compositions, the *Theriaca* Mithridate, &c.

TEREBINTHINA VENETA,

Venice Turpentine.

Venice Turpentine is a liquid Resin, extremely different from the former, or fine Turpentine of the Antients, though call'd by the same Name; it is the thinnest and most fluid of all the Turpentine; its Consistence is between that of thick Oil and thin Honey; it is extremely viscous and clammy, its Colour is a pale yellow, it is tolerably pellucid; its Smell is resinous and acrid, without the aromatic Flavour of the *Chian* Kind, and rather disagreeable than pleasing; its Taste is very disagreeable, hot, acrid, and bitter. It is to be chosen thin and fluid, pellucid, of a pale yellowish Colour, and free from accidental Foulnesses.

It is brought to us from the Mountains of *Savoy*, and from some Parts of *France*: We used to receive it from *Venice*, whence its Name *Venetian*, but that Place has a long Time lost the great Trade it once had in it. Though the *Chio* Turpentine was the true and genuine *Terebinthina* of the antient *Greeks*, this was not unknown to them: They did not however call it Turpentine, as we abusively do, but the Resin of the *Larix*, the Tree from which it is produced: And *Galen* complains, that in his Time, not only this but the common Turpentine

of our Times, that is, as he properly calls it, the Refin of the Fir, were by some People fold, and used under the Name of the true Turpentine.

The Tree which produces the *Venice Turpentine* is one of the *Monæcia Monadelphica* of *Linnaeus*, and one of the *Arbores fructua flore remoto coniferæ* of *Ray*. It is the common *Larch* Tree, describ'd by all the botanical Writers under the Name of *Larix*, and *Larix conifera folio deciduo*, and well known in our Gardens, where, though it makes a very bad Figure in Winter without its Leaves, it makes ample amends by the Beauty of its Appearance, and bright green of its Leaves in Summer. It grows to twenty Feet or more in Height: Its Bark is rough and crack'd on the lower Part, but smoother and evenner above: Its Wood is yellowish in Colour, firm and well scented. The Branches are sub-divided into small ones, which are tough and hang down, and are ornamented with short and narrow Leaves, a great many of which grow from the same Tubercle: The Flowers are of the Catkin Kind, and are barren: The Fruit grows in other Places, and is a small Cone, scarce larger than a Cypress Nut: The Tree is very common, wild, in the mountainous Parts of *Germany*, and in many other Parts of *Europe*. The Peasants of *Savoy* cut and wound the Trees in the great Heats, and collect the resinous Juice that flows from the Wounds in great abundance; it is at first thin as Oil and whitish, but it becomes somewhat thicker and yellowish as it is kept.

Venice Turpentine, distill'd in a *Balneum Vaporis*, yields a very small Quantity of a subacid Phlegm; and a large Portion, more than a fifth Part of its Weight, of a thin limpid Oil like Water: The Matter then taken out of the Alembic and put into a Retort, yields about an Ounce from the Pound of an acid Phlegm, and a small Quantity of an urinous one; a somewhat larger Quantity of Oil than before, but this yellow and thicker than the other; and after this, almost the whole Remainder in the Retort rises and comes over in Form of a reddish thick Oil; the small Remainder in the Retort will not yield the least Portion of Salt by Lixiviation. *Venice Turpentine*, more than all the other Kinds, gives the Violet Scent to People's Urine, and this whether taken internally, or only apply'd to Wounds: Given in Glysters it does this most speedily of all. It has the same Virtues with the *Cbian Turpentine*, but is more acrid, and therefore is less used internally than that, though it is a common Ingredient in balsamic and restringent Pills. In Clysters, dissolved with the Yolk of an Egg, it is an admirable Diuretic, and is of great Use in nephritic Cases. It is a common Practice to boil it to the Consistence of Resin, before giving it internally, but this dissipates a great Part of its Virtues.

Externally it is greatly celebrated as a Vulnerary and Balsamic, and is an Ingredient in a great number of Ointments and Plaisters: Dissolved in the Yolk of an Egg alone without farther Mixture, it makes an excellent Digestive; given in Glysters, it is of great Service in Dysenteries and Ulcerations of the Intestines. The Preparations of *Venice Turpentine* in Use in the Shops, are the Spirit, Oil, and *Colophony*. These are all prepar'd by the same Process. Put into a Retort as much *Venice Turpentine* as will fill one third Part of it, give a gentle Fire, and there will come over into the Receiver a fine limpid ethereal Oil, joined with a little Phlegm; this is call'd the Spirit of Turpentine: After this encrease the Fire, and a pellucid yellowish Oil will come over, this is properly and distinctly the Oil of Turpentine, but this is seldom met with. The

Alembic

Alembic is generally used instead of the Retort, and the limpid and watery Oil first mentioned is kept under the common Name of Oil and Spirit of Turpentine. The Mass remaining at the Bottom of the Retort, in this Distillation, is hard but friable, and glossy, and of a dark Colour, this is *Colophony*: If the Fire were urged farther less of it would remain, and a thick Oil wou'd come over call'd Balsam of Turpentine. The Oil and Spirit of Turpentine are diuretic, aperient, and detergent; they are by some commended in Pleurifies, and in Disorders of the Breast; but with us they are little used in such Intentions; the *Colophony* is less detergent than the Turpentine in its natural State, but it is given in Pills for the *Fluor Albus*, and Gleets; and is an Ingredient in many of the Plaisters of the Shops.

TEREBINTHINA ARGENTORATENSIS,
Strasburg Turpentine.

This is a Turpentine extremely different from the two former, and produced from as different a Tree, as that which yields either of those is from the other. In Consistence it is usually met with of a middle Degree, between the *Chian* and *Venice* Kind, much thicker than the *Venice*, and yet much thinner than the *Chian*: This however, though one of the most obvious of the Characters of Turpentines, is a very uncertain one, as they all vary in Consistence, as they have been longer kept. The *Strasburg* Turpentine has Characters enough however for the distinguishing it from the *Venice*, exclusive of this.

It is extremely clear and pellucid, and of a pale brownish yellow Colour; when fresh indeed it is white, but it so soon acquires somewhat of this brownish Cast, that we seldom see it without it: It is less tough and viscous than the *Venice* Turpentine: Its Smell is far from the disagreeable one of that Kind; it has indeed something of the Turpentine Flavour, but it has a grateful Fragrancy with it, and somewhat of the Citron like Scent of the true *Balm of Gilead*: It is less acrid and more bitter to the Taste than the rest of the Turpentines, and has the Citron Flavour in the Mouth much more strongly than when only smelt to.

It is brought to us from the Place whose Name it carries, and is produced in great abundance in the mountainous Parts of the Country thereabout. The *Greeks* knew it very well, they properly call'd it *Resina Elatina* or Resin of the Fir, and esteem'd it a good Medicine, but inferior to the *Chian* Turpentine.

The Tree which produces it is one of the *Monæcia Monadelphica* of *Linnaeus*, and one of the *Arbores fructua flore remoto coniferæ* of *Ray*. It is a Species of Fir, and is described by the *Bauhines*, *Tournefort*, and the rest of the Botanists, under the Name of *Abies Taxi folio fructu sursum spectante*. It is a tall handsome Tree: Its Stem has no Knots or Branches up to a great Height, above this Part the Branches grow circularly round the Trunk, four or five at a Joint; these have regular Shoots from them, standing crosswise two at a Joint: The Leaves are small, narrow, and short; they stand very thick on the Branches, and are of a bright green on the upper Side, and white underneath: The Cones or Fruit are short and thick, and stand erect on the Branches; they are generally loaded in Autumn with a large Quantity of Resin, as are also the Ends of the Branches, this is white and very fragrant.

The People where these Trees are frequent wound them in several Places, particularly on the Tops of certain Tubercles which arise under the Bark; the Resin

Resin flows abundantly from these, and is at first as thin as Oil, but it soon thickens: The finest is that which is obtained from the Tubercles before mentioned, but the common Method is to strip Pieces of the Bark of two Inches wide down from fifteen Feet high to within a Foot of the Ground, at a Hand's Breadth Distance all round the Tree; this is done in the End of May, and the Turpentine flows down into Vessels placed to receive it for a long Time: After this the Cracks or Wounds fill up with a dry Resin, which is taken out afterwards, and sold by the Name of white Incense. The Virtues of the *Strasbourg* Turpentine are in general the same with those of the *Venice* Kind: It is esteem'd indeed more detergent and diuretic, and the Agreeableness of its Flavour makes it more esteem'd for internal Use.

TEREBINTHINA COMMUNIS,
Common Turpentine.

This is a fluid Resin different from all the former Kinds in many Respects, and the least esteem'd of any. It is a very coarse Matter, of a Consistence much thicker than any other Turpentine, except the *Chian*, and of a dirty brownish white Colour: It is as thick as Honey, and as little pellucid; it is very tough and viscous, and much heavier than the other Turpentine; its Smell is strong and very disagreeable, and its Taste very bitter, acrid, and nauseous. It is brought to us in great abundance from many Parts of *Germany*, and in *France* it is produced also in great abundance.

The Tree which affords it is one of the *Monæcia Monadelphica* of *Linnaeus*, and one of the *Arbores florea fructu remoto coniferae* of *Ray*. It is of the Pine Kind, and is described by the botanical Writers under the Name of the *Pinus Sylvestris*: It resembles the *Pinus Sativa* in all Respects, but is lower, and its Leaves are shorter, and its Fruit smaller. Though this is the Tree it is usually and most abundantly produced from, it is not however the only one that affords it; all the Species of Pine yield it, and where they are common it is collected from them. It often flows spontaneously, but sometimes they wound the Trees to procure a larger Quantity of it. There is no Tree in the World which affords such an abundance of Resin as the Pine, it is often so loaded with the Abundance and Turgescence of this Juice, as to be choak'd by it; this is a Disease almost peculiar to the Pine, which is call'd *Tæda* when under it. The Pitch Tree, and the *Larix* or *Venice* Turpentine Tree, sometimes also become *Tædæ*, but this is very rare; there are fifty of the Pine for one of either of these.

They wound the Trunk of the Pine when full of this Juice, and dig a Trench at its Foot, into which the liquid Resin runs; the upper Part of this dries and hardens into a solid Matter, which they call *Barras*; and if it proves white and clean, they sell it to the Druggists under the Names of Galipot, or Garipot, and white Frankincense; if it is dirty it is sold at a cheaper Rate, and call'd common Incense. They mix both these with Wax for the making of Flambeaux, but the white is the most esteem'd. The more fluid Mass under this Crust they strain through Wicker Baskets into Barrels, what goes thro' is pack'd up and sent away under the Name of common Turpentine; what is fouler and remains behind, they distil in an Alembic with a large Quantity of Water, and obtain from it the common Oil of Turpentine.

The common Turpentine is rarely used in Medicine, some make it an Ingredient in Ointments instead of the *Venice* Kind, but it spoils their Consistence.

Its

Its Virtues are in general the same with those of the other Turpentine, but it is so much coarser, and more offensive to the Palate and Stomach than all the rest, that it is no Wonder it is not used as they are.

These are the four Species of Turpentine used in our Shops, the Antients knew them all, and distinguish'd them by Names, not of the uncertain Kind that ours are, form'd on the Names of the Places whence they are brought, or on their Frequency or Cheapness, but on the Names of the several Trees which produced them, instead of the Obscurity and Ignorance that attends our Method of naming them. It were much to be wish'd, that those who have Occasion to write of them hereafter, would banish these inexpressive Names, and call them after the manner of the *Greeks*: The first Turpentine simply, as the Refin of the Turpentine-Tree; the second the *Resina Laricis*, or Refin of the Larch-Tree; the third the *Resina Abietis*, or Refin of the Fir-Tree; and the last the *Resina Pini*, or Refin of the Pine-Tree; the very Names would then carry with them a Remembrance of the Nature of the Drug.

C H A P T E R V I.

L I Q U I D A M B A R U M, *Liquid Amber.*

TH E Drug call'd in the Shops *Liquidambarum*, Liquid Amber, and *Ambarum Liquidum*, is a fluid Refin, of a fatty Appearance, tough and viscous, and in Consistence a little thicker than *Venice* Turpentine when tolerably new, but in long keeping it grows almost solid. Its Colour is a reddish yellow, somewhat more of the red than what we usually understand by the Term Orange colour'd, but with some Admixture of brown in it. Its Smell is very fragrant, seeming a Mixture of the aromatic and perfum'd Kind, and resembling the Smell of a Mixture of *Styrax* and Amber. Its Taste is somewhat acrid, and it is very aromatic, and fragrant on the chewing.

Liquid Amber is brought from *New Spain*, and some other Parts of *America*. Some Years ago it was very frequent in the Shops, and a more fluid Kind of it, call'd Oil of Liquid Amber, was not less frequent among us, but at present both are grown into Disuse, and it is not easy to meet with either.

The Tree which produces it is one of the *Monæcia Polyandria* of *Linnaeus*, and one of the *Arbores flore fructuque aggregato* of Mr. Ray. It is described by *Hernandez* under the Name of *Xochio cotzo Quabuite Arbor Liquidambari Indici*, and by *Ray* under that of *Styrax aceris folio*, and *Arbor Virginiana aceris folio*, *potius Platanus Virginiana Styracem fundens*. It is a very beautiful Tree: It grows to a vast Height: Its Leaves are broad and divided like those of the Maple, and the Fruit in some Degree resembles that of the *Platanus* or Plane Tree, consisting of several yellowish Capsules, prominent in part, and terminating each in a prickly Point: The Seeds are of an oval Form. This Tree wounded in the great Heats, affords a large Quantity of the fragrant Refin, call'd Liquid Amber; and the Fluid, call'd Oil of Liquid Amber, separates itself to the Surface of this when it has stood some Time in the Vessels. When we bought large Quantities of this Drug, the *Indians* had a Way of adulterating it with another fluid-Refin, produced in the manner of the black
Peruvian

Peruvian Balsam, by boiling the Branches of the Tree in Water, and separating the oily Matter found swimming at Top; they sometimes also ventured to send this over alone, under the Name of Liquid Amber, but it was always coarser, less pellucid, and less fragrant than the genuine Drug. It was used much by the Perfumers, and to scent Gloves, and other Parts of the Habit. In Medicine it was esteem'd detergent and balsamic, and was given to promote Urine and the Menfes: Externally also it had great Credit as a Digestive, but at present we have wholly rejected it in all these Intentions.

CHAPTER VII.

STYRAX LIQUIDA,
Liquid Storax.

THE Drug known in the Shops under the Name of Liquid Storax is wholly different from the common Storax; nor is it easy to guess how it came to be call'd by the same Name. The old *Greeks* knew but one Kind of Storax, which was the solid Kind, in Use in the Shops at this Time; but the *Arabians* distinguished this Drug into two Species, a solid, and a liquid; which Distinction is kept up to this Time, and the Name Liquid *Styrax* given to a Substance as different as one thing well can be from another, from the dry or solid Kind. What we call Liquid Storax, and the *Arabians* *Miba*, is a fluid Resin, or resinous Juice, of which we have two Kinds, the one pure, the other foul.

The pure or fine Liquid Storax is a thick viscous Matter, of the Consistence of *Venice* Turpentine, or thicker; sometimes indeed with long keeping it becomes as thick as Honey; whatever be its Consistence however, it is clean and pellucid, of a brownish Colour, sometimes with a Cast of reddish, sometimes greyish in it: Its Smell is somewhat like that of the common Storax, but much stronger, and even disagreeable: Its Taste is acrid, aromatic, and somewhat bitterish; and it is oily or unctuous. It is to be chosen thin, pellucid, of a clean brown Colour, and of a very strong Smell.

The impure or coarse Liquid Storax is a tough and viscous Matter, of the Consistence of Birdlime; it is not at all pellucid; its Colour is grey or brownish; it is less resinous, and more fatty than the finer Kind; its Smell is much more languid, and its Taste more disagreeable: It seems indeed to be no other than the fouler and less valuable Matter, separated from the other in the purifying it. It is by much the most common Liquid Storax in the Shops, and to this foul Drug some of the late Writers, and indeed some of the *Arabians*, have given the Name of *Stacte*, the Name of a very pretious Drug related to *Myrrh* among the old *Greeks*. We very seldom meet with the pure Liquid Storax in the Shops; and even the other, bad as it is in itself, is often adulterated, our Druggists sometimes mixing no cleaner a Substance than common Birdlime with it on this Occasion.

Authors have had great Disputes about the Origin of Liquid Storax, the Name *Stacte* however absurdly apply'd to it, has induced some to believe it was no other than a Preparation of *Myrrh*, but this is proved false by Experiment: *Myrrh*, in whatever Form, being in great Part soluble in Water, this

only in oily or fatty Substances as the other Refins are; and to this it may be added, that its Taste and Smell are wholly different from those of *Myrrh*. Others have thought it a Preparation of the common Storax, with Wine, Oil, and Turpentine, prepar'd either by Decoction or Expression. Others have suppos'd it a natural Refin, expressed from the Fruit of the Storax Tree; and others a Preparation of the Nature of the Balsam of *Peru*, made by boiling the young Shoots, and Buds of the Storax Tree, or of the Liquid Amber Tree.

Petiver gives us a much more rational Account of it, if it may be depended on; he tells us, that it is prepar'd from the Bark of a Tree, call'd by the *Turks* *Rosa Mallos*, which is frequent in the Island *Cobras*: They annually strip the Bark off this Tree, he says, and after bruising and macerating it in Sea-Water, they boil it down to the Consistence of Birdlime: They then collect the resinous Matter which swims on the Surface, which being foul they melt it, by boiling it again in Sea-Water, and in this Condition strain it: What passes the Bags is the finer, and what remains in them the coarser Liquid Storax. He adds, that it is a Drug in great Esteem in the *East*, where it is used as a Perfume. It is a little unlucky that no Body has given us any Description of this *Rosa Mallos*, the Tree which *Petiver* so positively names as that which produces this Drug.

The Virtues of Liquid Storax are nearly related to those of the Turpentine. It is prescribed internally as a Detergent and Diuretick; and externally to prevent Mortifications. The *French* use in their Hospitals an Ointment, which they call *Unguentum de Styrace*, and speak much of its Virtues. The Preparation is this: Melt in five Ounces of Nut Oil, *Gum Elemi* and yellow Wax, of each three Ounces and three Drams; add Colophony seven Ounces and a half; when all these are perfectly melted together, add pure Liquid Styrax three Ounces and three Drams; let the whole be well mix'd, and then cool.



Natural vegetable Productions

Used in M E D I C I N E.

C L A S S the S E C O N D.

S O L I D R E S I N S.

TH E Bodies of this Class are somewhat more numerous than those of the former, and may be conveniently arrang'd in two Divisions, as they are more or less frequently used in the Shops.

The solid Refins more frequently used are,

- | | |
|--------------|-------------------|
| 1. STORAX. | 5. ELEMI. |
| 2. BENJAMIN. | 6. LAC. |
| 3. MASTICK. | 7. DRAGONS BLOOD. |
| 4. OLIBANUM. | 8. CAMPHIRE. |

The solid Refins less frequently used are,

- | | |
|----------------|------------------|
| 1. ANIME. | 5. LADANUM. |
| 2. COPAL. | 6. SANDARACH. |
| 3. CARANNA. | 7. RESINA HEDUÆ. |
| 4. TACHAMAHAC. | |

S O L I D R E S I N S

More frequently used in M E D I C I N E.

C H A P T E R I.

STYRAX,
Storax.

ST O R A X is a dry and solid Refin, of a reddish Colour, and a peculiarly fragrant Smell, of which the Antients have distinguish'd two Kinds, very different in Value, under the Names of the *Styrax Calamita*, and *Styrax Vulgaris*, the common, and the *Calamite Styrax*, a Distinction we still keep up.

The *Styrax Calamita*, call'd also *Styrax* in Tears, is vastly the purer and finer Kind. It is brought over to us in small loose Granules, or else in larger Masses composed of such, with no other Substance between or among them: These

Granules,

Granules, or little Lumps, are from the Bigness of a Pin's Head to that of a large Pea, or bigger; they are usually of a pale brownish red Colour, sometimes whitish, and of a tolerably firm Substance; they become somewhat fatty in the Mouth, and form a tough Matter on chewing. This Kind of Storax is of a very agreeable Taste, somewhat acrid and resinous, but sweet and pleasant withal; the Smell is very fragrant, but especially on burning: A little of it thrown on burning Coals, or only held to a Candle runs at once, and afterwards takes Fire, burning with a brisk Flame, and an extremely fragrant Smell. This fine Kind of Storax used antiently to be packed up in Reeds for Safety of Carriage, and it was thence that the Antients call'd it *Styrax Calamita*.

The common Storax is a pure and fine Resin, though less so than the former Kind. It is brought to us in large Lumps, not form'd of small Granules connected together, but of one uniform Consistence. It is of a brownish or somewhat Orange-red in Colour, deeper than the *Calamite* or fine Kind, and more fatty in its Appearance: It shines and appears resinous however where broken, and becomes tough in handling: It sometimes is soft, and exsudates from the larger Masses particularly, a kind of fluid Resin of the Consistence of Honey: This has the same fragrant Smell, and the same Taste with the *Calamite* Storax, only in a fainter and more remiss Degree.

These are the two Kinds of Storax, properly distinguish'd by the Names of the *Calamite*, and common Storax, but neither of these are the Storax commonly met with in our Druggists Shops; what is constantly met with under the Name of Storax there, is a Matter form'd of a kind of Saw-Dust connected into Lumps, or large and light Masses, by just as much of a fragrant Resin of the Storax Kind, as will make them hang together. This is what our Apothecaries use under the Name of Storax, but they are to be advised, if they cannot get either of the other Kinds, never to use this in its rough State, but to strain the pure Resin from the Filth, and use no Part of the latter.

This foul Storax, where any other is to be had, ought wholly to be rejected; the other two Kinds do not differ from one another, any otherwise than as they are let out from the Tree by natural Exsudation, or by Incision; what flows naturally forming small Drops, and drying soon; the other running from Wounds in the Tree in larger Quantity, and drying more slowly and imperfectly, and acquiring a deeper Colour by that means.

Storax is brought to us from *Syria*, and the *East-Indies*. It is to be chosen pure, very fragrant, and of an acrid Taste.

The *Arabians* in general have confounded the solid and liquid Storax together, some of their Writers however have distinguish'd them, as *Avicenna*, who treats of the liquid Storax under the Name of *Miba*, and of the dry under those of *Astarac* and *Lebni*.

The Tree which produces the Storax is one of the *Icosandria Monogynia* of *Linnaeus*, and of the *Arbores fructu Calyculato* of *Ray*. It is described by *Tournefort*, and others, under the Name of *Styrax Arbor*, and *Styrax folio mali Cotonei*. It grows to a moderately large Tree: Its Bark, and its Leaves, greatly resemble those of the common Quince Tree; they are of a bright green on the upper Side, and whitish underneath: The Flowers grow in little Clusters, four, five, or six together, from the Shoots of the former Year; they are white, very sweet scented, and in some Degree resemble Orange Flowers:

The Fruit is of the Size of a Walnut, thick, fleshy, and hoary; sweet at first, but afterwards of a bitterish Taste; containing one or two Seeds, the Kernel of which is white, and has the Taste of Storax. The Tree grows in some of the warmer Parts of *Europe*, as well as in the *East*, but with us it does not afford any Refin.

Styrax, chemically analysed, yields first a small Portion of an acid Phlegm of a reddish Colour; after this a reddish clear Oil, in about the Quantity of six Drams from the Pound; after this there comes over a thick Oil, and a volatile Salt sublimes to the Top of the Vessel in Form of Flowers, like those of Benjamin; after this a yet thicker reddish Oil comes over, and the Remainder in the Retort, calcined and lixiviated, yields an extremely small Portion of a fix'd Salt, not of the alkaline but of the *Sal Salsus* Kind, the Quantity not more than four Grains from the Pound.

Storax is found, by these Experiments, to contain a smaller Quantity of essential volatile Salt than Benjamin, but much more of a fine thin Oil; though even in this, the Quantity of that Oil is much less than in most of the other Refins.

Storax is much recommended as a Detergent and Balsamic, in Disorders of the Breast: It is also esteem'd a Cordial, and is recommended in Vertigos, and other Disorders of the Head and Nerves. It is an Ingredient in many of the old Compositions, but it is not greatly used in extemporaneous Prescription. A fine fragrant Oil may be procured from it by Distillation in the Alembic with Water, and Flowers may be procured from it in the same manner as from Benjamin, and having the same Virtues with those of that Refin, but these Preparations are not made or call'd for in the Shops.

C H A P T E R II.

BENZOINUM, *Benjamin.*

BENJAMIN is a dry and solid Refin, brought to us in Masses of various Sizes, often considerably large: It is moderately heavy, and of a seemingly compact Texture, but really very friable and shattery, breaking into a number of Fragments on a slight Blow: The Masses of it are not simple and uniform as in many of the other Refins, but are composed of a number of smaller Masses or Granules, which are of a whitish or yellowish Colour, but with a Cast of greyish and purplish on the Surface. It is very inflammable, and diffuses a fragrant Smell while burning: It is naturally also of a brisk, pungent, and agreeable Smell, and of an acrid but not disagreeable Taste. It easily breaks between the Teeth, and has a remarkably resinous Taste at first in the Mouth. We distinguish Benjamin into two Kinds in the Shops, the amygdaloid, and the black; the amygdaloid is the Kind just described, and is so call'd from the Granules it is composed of, in the Mass looking like the Kernels of Almonds, especially when it is first broken; the black is brought in Masses of a dusky Colour, with none of these whitish Granules in them.

Benjamin is brought to us from the *East-Indies*. The Kingdom of *Siam*, and the Islands of *Java* and *Sumatra* afford it in great abundance.

It

It is to be chosen fresh, and of a quick pungent Smell, easily broken, and full of the white Almond like Granules. The black *Benjamin* is vastly inferior to this, and ought wholly to be rejected.

The Ancients were not acquainted with this Drug, as *Garcias* has been at the Pains abundantly to prove. The Tree which produces it is one of the *Enneandria Monogynia* of *Linnaeus*, and one of the *Arbores pruniferae* of Mr. Ray. It is described by *Caspar Baubine* under the Name of *Belzoinum*, and by *Grimm* in the *German Ephemerides* under that of *Arbor Benzoini*. *Linnaeus* in the *Hortus Cliffortiana* describes it under that of *Laurus foliis enerviis ovatis utrinque acutis integris annuis*. It is a very large and beautiful Tree. Its Leaves are somewhat like those of the Lemon Tree, but smaller and whitish underneath. Its Flowers are small and resemble those of the Bay Tree, whence *Linnaeus* has made it of that Genus. Its Fruit is of the Size of a Nutmeg, roundish, but somewhat compressed, and consisting of a soft external Part like the green Coat of a Walnut, but less thick, and a Nut within, the Shell of which is thinner than that of a Filbert. The Kernel is white or greenish, and is covered with a wrinkled Skin of a red Colour. *America* furnishes us with no *Benjamin*, but the Tree which produces it in the *East*, is common there.

When the *Benjamin* Trees in *Java* and *Sumatra* are six Years old, the Natives cut them in several Places under the large Branches in an oblique Direction, wounding them to the Wood. The *Benjamin* flows from these Wounds, and is white and soft at first, but by Degrees it becomes harder, and acquires a brownish or reddish Colour on the Surface from the Air. If this is taken from the Tree in Time, it is clean and fine, if not, it gets mixed with several Foulnesses, and becomes of much less than its natural Value. A good vigorous Tree properly wounded, will sometimes yield six or seven Pounds of fine *Benjamin*; but in general half that Quantity is reckoned no bad Produce. They never cut the same Tree a second Time, but as they are quick Growers they cut down the Tree they have used, to make Room for other younger ones to grow vigorously up to the Period of the sixth Year for Use.

Benjamin, distilled in a Retort, yields a considerable Quantity of Oil, part of it yellow, thin, pellucid, and very fragrant, and part thick and brown. Beside this, it yields a moderate Portion of an acid Liquor, and by Lixivation the Remainder yields a little fixed Salt, leaving behind it but a very small Portion of Earth. If the Gum be sublimed in close Vessels, it sends up a great Quantity of fine, light, and pungent Flowers, and the same are also separated from it by boiling it in Water. In the latter Process it remains suspended, and in a State of Solution in the Water while hot; but as it cools it forms itself into long Needles. A Pound of *Benjamin* will yield two Ounces of Flowers by Sublimation, and the same Quantity will yield about one Ounce or very little more by Decoction.

Benjamin is a great and powerful Expecto- rant. It is given with Success in Asthmas and Inflammations of the Lungs, and in inveterate Coughs. The Flowers are however oftener given in these Intentions than the Resin in Substance. It is sometimes used externally in Plaisters applied to the Head for Head-achs, and to the Stomach to promote Digestion. A Tincture of it made in Spirit of Wine and dropped into Water, makes what is called Virgin's Milk, used to

take Pimples out of the Face. The only Preparation of *Benjamin* used in the Shops beside this Tincture, is the Flowers which are thus prepared.

FLORES BENZOINI,
Flowers of Benjamin.

Beat a Quantity of *Benjamin* to a gross Powder; put it into a tall earthen Vessel capable of holding four times as much; and fit to the Top of the Pot a Cone of double Paper as tall as the Pot is high, or more than so; then make a very small Fire under the Pot, and having several more Paper Cones of the same Kind at Hand, every Hour take off the former, and put on a fresh one; unroll the Cones as they are taken off, and there will be found in them the Flower of *Benjamin* in fine silky Filaments; they must be swept off with a Feather, and kept in a Vessel well stopped.

They are sudorific, and good in Asthmas and Tubercles of the Lungs.

CHAPTER III.

MASTICHE,
Mastich.

MASTICH is a solid Resin different from the former, in that it is not brought to us in large Masses, but in the Drops or Tears as it naturally forms itself in exsuding from the Tree, which remain detached and single.

It is very firm and solid, of a pale yellowish white Colour. Its Smell is somewhat acrid but agreeable, its Taste very resinous, but withal it is somewhat aromatic and astringent. When taken into the Mouth it immediately flies to Pieces between the Teeth; but the Heat of the Part soon acts upon it; and it concretes again into a tough Substance like Wax, which takes any Form without breaking; and by continued chewing becomes as white as Snow. The Granules or Lumps of Mastich are usually about the Bigness of a Pea, and of a somewhat roundish Form. They are very easily reduced to Powder in a Mortar, and if thrown on burning Coals, they readily take Fire, and afford a resinous but very agreeable Smell.

Mastich is brought to us principally from the Island of *Chios* in the *Ægean* Sea. It is found there better and in greater Abundance than in any other Part of the World. It is to be chosen clear, pellucid, and of a pale yellowish Colour, well scented and brittle. Such as is blackish, greenish, or dirty is to be rejected. We meet with a Kind of Cement sometimes kept in the Shops under the Name of Mastich. It is composed of Mastich and several other Ingredients, and is formed into Cakes for Use: This is intended for the Service of the Lapidaries to fill up Cracks in Stones, and for other such Purposes; but is by no Means to be used as Mastich for any of the medicinal Purposes. The *Greeks* were acquainted with Mastich: *Dioscorides* and *Theophrastus* call it *Mastiche* and *Resina Scbinina*. The *Arabians* call it *Mastick*, and we *Mastiche*, *Mastix*, and *Resina Lentiscina* from the Name of the Tree which produces it.

This Tree is one of the *Arboris flore a fructu remoto bacciferae* of *Ray*. It is described by *Gaspard Bauhine* and the other botanical Writers, under the Name of the *Lentiscus vulgaris*, or the common Lentisk Tree. It grows to twelve or fifteen

Feet

Feet high, and is usually very much branched : Its Leaves are of the pinnated Kind, and have no odd Leaf at the End. They are small but thick, smooth, and of a shining green, of a quick Smell and acrid Taste. Some of the Trees bear the male Flowers which are of the stameneous Kind, and others the Fruits which stand in Clusters, and are of the Size of Ivy Berries. They consist of a hard Shell, covered with a resinous Membrane, and containing a soft and strongly scented Kernel. This Tree approaches greatly to the Turpentine Kind, which it differs principally from, in that it has no odd Leaf at the End of the *Pianæ* as the Turpentine Tree has. It grows not only in the other Islands of the *Ægean* Sea as well as in *Chios*, but also in *France*, *Spain*, and *Italy* ; but it does not afford the Resin in any Part of these Countries. In *Chios* it flows spontaneously in no small Quantities, but the People always wound the Trees also, to procure the larger Quantities.

Bellonius says, that the Tree yields Mastich no where but in the Island of *Chios*, where it is cultivated for this Purpose, with as much Care as Vines are with us, and that the great Riches of the Island are in this Drug, which the Tree yields but in very inconsiderable Quantity without this Culture ; but by this means they are able, beside what they send into our Part of the World, to pay by Way of Tribute to the Grand Seignior, an immense Quantity of it. The Trees are wounded in the Months of *August* and *September*, and the Resin continues flowing from them a long Time.

Mastich, distilled in a Retort, yields first a limpid but scented Phlegm, of a subacid Taste in the Proportion of about an Ounce to the Pound ; after this there comes over a browner Liquor of a more strongly acid Taste, and somewhat bitterish, in a little more than the same Quantity ; then a limpid and clear, but reddish Liquor, of a mixed acid and alkaline Nature. This is in very small Quantity, not more than forty or fifty Drops from the Pound ; then about half a Dram from the Pound of a fine yellow limpid Oil, followed by twice the Quantity of a reddish limpid Oil, and this by eight Times the Quantity of a brown, but yet thin, clear, and limpid Oil ; after this comes over a thick brown Oil of the Consistence of Honey, and this in no less Proportion than ten Ounces to the Pound. The Remainder in the Retort is very small in Quantity, and when calcined, it yields by Lixiviation an extremely small Portion of a fixed Salt. not more than two or three Grains from the Pound, and this not of the alkaline, but of the *Sal Salfus* Kind.

The People of *Chios* are so fond of Mastich, that they make it an Ingredient even in their Bread by Way of giving it a better Flavour. They have some of it also continually in their Mouths by Way of Mastichatory. They say it cleans and fastens the Teeth, and gives the Breath an agreeable Smell. In Medicine it is detergent, astringent, and stomachic. It is greatly recommended in inveterate Coughs, and against spitting of Blood. It strengthens the Stomach, assists Digestion, and stops Vomitings. It is also used externally in Plaisters to the Region of the Stomach and Intestines, and is said to stop Vomitings and Purgings by that Means. It is an Ingredient in many of the old Compositions.

CHAPTER IV.

OLIBANUM,
Frankincense.

OLIBANUM is a dry resinous Substance brought to us in detached Pieces or Drops as it were, like those of Mastich, but larger and of a less pure and pellucid Texture. It is of a pale yellowish, white Colour, but with some Mixture of a brownish Cast in it. The Granules or Drops of it are roundish or oblong, of a smooth Surface, and tolerably firm Texture. It is moderately heavy: Its Smell is strong, but not disagreeable, and its Taste bitter, acrid, and resinous. It is very inflammable, and if only touched with a lighted Candle it burns with a bright and copious Flame. It readily breaks between the Teeth, but it does not concrete into a tough Mass in the Manner of Mastich, but sticks to the Teeth and is very disagreeable in the Mouth. The Drops of *Olibanum* sometimes adhere two or more together; when two oblong and small ones adhere to one another: Fanciful Writers have called such male Frankincense, from the Resemblance to a Man's Testicles, and when two larger and rounder Pieces adhered, they likened it to a Woman's Breasts, and called it female Frankincense, and hence the Origin of the *Thus testiculosum* and *Thus mammosum* of these Writers. Sometimes four or five of these Granules were found adhering together to the Bark of the Tree. This was called the Cluster Frankincense, and the small Fragments broke off from the rest in the Carriage were preserved separately, and made another Kind under the Name of *Manna Thuris*, the Manna of Frankincense. How idle and ridiculous were such Distinctions among People who knew at the same time, that the Drug was the same under all those accidental Forms?

Olibanum is to be chosen whitish, pure, dry, and as much approaching to Pelucidity as may be. It has been known the most universally of perhaps any Drug in the World, and that from as early Times as those of *Theophrastus* and *Dioscorides*, who describe it under the Name of *Libanos*, and *Hippocrates* also mentions it under that of *Libanoton*. The *Latins* call it *Thus* and *Tus*, and the *Arabians* *Rouder*, *Conder*, and *Hateth*. The earliest Accounts we have of any thing, tell us, that Frankincense was in use among the sacred Rites and Sacrifices, and it is used in many different Parts of the World at this Time to the same Purposes. As well however as the World has at all Times been acquainted with the Drug itself, we are not yet well acquainted with its History. The Country which produces it is a much disputed Point among Authors. Some affirm it never was found any where but in *Arabia*, and there only in that Part called *Sabæa*, or from this famous Product *Arabia Thurifera*. Others are for bringing it from *Æthiopia*, and some others from other Places.

If we are uncertain as to the Place whence the *Olibanum* is brought, we are much more so as to the Tree which produces it. *Theophrastus* mentions it, but that in such a Manner, as shews he was very uncertain about it. He describes it as a small Shrub very much branched, and having Leaves like the Pear Tree; but he tells us that others said its Leaves were like those of the Lentisk, and that others said that both the Leaves and the Bark of the Tree were like

like those of the Bay Tree. *Diodorus Siculus* says it grows like the *Ægyptian Accia*, but with Leaves like those of the Willow. *Garcias* makes it a low Shrub with Leaves like those of the Lentisk, and on the contrary *Thevet* says it resembles the Pine Tree. Which of these Accounts approaches most to the Truth, we have yet no means to distinguish.

Olibanum, distilled by a Retort, affords first a moderately large Quantity of an austere and acid Phlegm, having the Smell of the Resin, and a reddish Colour; there is no less than four Ounces of this from the Pound; after this comes over a reddish Liquor in small Quantity, partly acid, and partly urinous, then somewhat more than half an Ounce from the Pound of a fine yellow limpid Oil; after this a larger Quantity of a brown, limpid, and thin Oil, but somewhat thicker than the former; then a large Quantity of a blackish Oil as thick as Butter. The Mass remaining in the Retort after this, is but in small Quantity, and this calcined yields, by Lixiviation, about ten Grains to the Pound of a fixed alkaline Salt like that of Tartar or Potashes.

Olibanum is greatly commended by many against Disorders of the Head and Breast, and against Diarrhœas, Dysenteries, and *Profluvia* of the Menfes, and the *Fluor Albus*. Its Dose is from ten Grains to a Dram. It is by many esteemed a Specifick in Pleurifies, especially when epidemic.

Externally it is used in Fumigations for Disorders of the Head and against Catarrhs, and is an Ingredient in some Plaisters. It is a noble Balsam in Consumptions given in Substance, or dissolved with the Yolk of an Egg into the Form of an Emulsion. There is an Oil made of it by *Deliquium* in the same Manner as that of Myrrh. This is done by putting the Powder of it in the White of a boiled Egg in a Cellar, till it runs into a Liquor; this is esteemed a great Cosmetic and Destroyer of Pimples in the Face. *Dioscorides* had his Doubts about the internal Use of *Olibanum* in large Doses; he talks of its bringing on Madness and even Death: But none of the other Greek Writers say any thing of its ill Qualities, nor do we at present know any thing of them.

CHAPTER V.

E L E M I.

WE very improperly call this Drug Gum Elemi. It is truly a Resin, and of this Class, having all the Characters of the Resin Kind, and no one of that of the Gums. It is to be observed that we have two Kinds of this Resin in the Shops, the one genuine and brought from *Æthiopia*, the other spurious, and the Produce of *America*.

The true or *Æthiopian* Elemi, is a Resin of a yellowish Colour, with somewhat of a Cast of green and of white among it. It is hard, dry, and firm towards the Surface; but when broken, it is always found to be soft and in a Condition easily to receive an Impression from the Finger, within. We sometimes meet with it in irregularly shaped flattish Masses, but more usually in cylindric ones. Its Smell is acrid and resinous, but pleasant, and its Taste acrid and bitterish. It is very inflammable, and readily dissolves in Oil or any other fat Substance over the Fire. These two Characters alone are sufficient

cient to distinguish it from the Gums, as all the Drugs of that Class are neither inflammable nor soluble in Oil. When the Masses of this genuine Elemi are rough and irregular, they are generally uncovered or naked on the Surface, but when rolled into the cylindric Form, they are usually covered with the Leaves of a Plant of the Reed or Palm Kind. This genuine Elemi is very rare at present in *Europe*.

We are not yet acquainted what Tree it is that produces the true *Æthiopian* Elemi. Many are of Opinion, that it is of the Olive Kind, which has thus much Probability on its Side, that the Olive Trees in *Apulia*, where they grow very large, do in the great Heats sometimes exfudate a resinous Substance so like Elemi, that the Surgeons of that Country use it as such, and call it by that Name. They cure fresh Wounds with it, and use it in Fumigations, in which Case it yields a very fragrant Scent. How nearly allied this is however to the true *Æthiopian* Elemi, or how nearly the Trees agree with one another, is a Question that farther Observation alone can decide.

The spurious or *American* Elemi, which is almost the only Kind now known in our Shops, is a Resin of a whitish Colour, with a greater or less Tinge of a greenish or yellowish. It is in some Degree pellucid, and much approaches to the Nature of the Pine Resin in its Appearance. It is sometimes quite dry and friable, but more usually it is soft, and capable of receiving an Impression from the Finger. It is in this Case tough and fattish to the Touch. It is of an agreeable Smell, and of an acrid and bitterish Taste.

It is to be chosen greenish and as pellucid as may be, perfectly clean from accidental Admixtures of Sticks, Straws, &c. and of a fragrant Smell. It is brought to us from the *Brazils*, new *Spain*, and several of the *American* Islands.

The Tree which produces it is one of the *Arbores pruniferae* of Ray. It is described by *Marcgrave* under its *Brazilian* Name *Itacariba*, and in Ray's History under that of *Arbor Brasiliana Gummi Elemi fundens foliis pinnatis flosculis verticillatis fructu Olivæ figura et magnitudine*. It is a tall Tree; its Bark is greyish and smooth; its Leaves pinnated, but consisting only of two or three Pairs of *Pinnæ* with an odd Leaf at the End: Each single Leaf is like that of the Pear Tree. The Flowers are small and stand in Clusters at the Setting on of the Leaves. They are greenish, but edged with white. The Fruit contains within it a pulpy Matter of the same sweet Scent with the Resin. The *Brazilians* wound the Tree over Night, and in the Morning collect the Resin that has run out.

Elemi, on a chemical Analysis, yields a small Quantity of a limpid and insipid Water, smelling however of the Resin; after this comes a somewhat acid Liquor, and after this a limpid and reddish Oil, very fragrant, then a reddish and thick Oil like Butter in a very large Proportion. The Remainder in the Retort is not in greater Quantity than an Ounce from the Pound; and from this the most carefully managed Lixiviation cannot obtain more than about six Grains of fixed Salt, and that not of the alkaline, but merely of the *Sal Salsus* Kind. There is indeed not the least Mark of any thing of an alkaline Nature in any Part of the Process.

Some have recommended the *Æthiopian* Elemi given internally as a Detergent and Diuretic. But at present the only Use made of the Elemi of our Shops

Shops is external. It is greatly recommended for resolving Tumours, deterring old Ulcers, and allaying the violent Pains attending them. It also resists Putrefaction, and is esteemed the greatest of all Balsams for Wounds of the Head. The famous compound Balsam called *Arcæus's* Liniment, has this Resin for its Basis. It is also an Ingredient in many other Compositions.

There are a great many Resins sent over from different Parts of *America* under the Name of Elemi, which have something of the Smell of the genuine Resin, but differ from it in Colour and other Qualities. These are yellowish, whitish, or greyish, but seldom have the greenish Cast that characterizes the Elemi.

CHAPTER VI.

L A C C A,

Lac.

L A C C A or Lac is another of the vegetable Products usually distinguished by the Name of a Gum, but that as improperly as the Elemi, it being like that, inflammable, and not soluble in Water. We distinguish three Kinds of *Lacca* in the Shops, which are all the Products of the same Tree, and only differ in Form. They are, 1. The Stick Lac. 2. The Seed Lac: And 3. The Shell Lac.

The Stick Lac is a hard, resinous, and friable Matter, of an uneven and granulated Surface, and of a reddish but somewhat dusky Colour. It is of an austere and subastringent Taste, and is fixed round certain Sticks, and round Branches of a woody Substance.

The Seed Lac is brought to us in loose Grains, or little Masses, of a roundish irregular Figure, and of a reddish Colour. They seem no Way different from the Stick Lac, but as Parts from the whole, and seem the Granules of which the Matter concreting round those Sticks is formed, only loose and not connected one to another. Their Taste and Smell are the same with those of the Stick Lac.

The third Kind or Shell Lac is met with in thin and transparent Cakes, which are made by melting the former Granules, or the other Matter taken from the Sticks, into a Mass.

We are not at all perfect in the History of this Drug: What has been advanced by Authors about it, leaving us uncertain whether it properly belongs to the vegetable, or to the animal Kingdom.

The Tree on whose Branches it is usually found, is one of the *Icosandria Monogynia* of *Linnaeus*, and one of the *Arbores pruniferae* of *Ray*. It is described by Authors under the Name of the *Jujuba Indica*, *Malus Moluccensis*, and *Zizyphus Zeylanica argentea*. *Herman* assures us that he had himself collected Gum Lac from Wounds which he made in the Bark of a small Species of this Jujube; and there are two or three other Trees of the same Genus that are said to afford it. There are others however that affirm it to be no vegetable Exsudation at all, but a Substance analogous to Wax, laid on these Branches by Insects. Till we have some very good Observer on the Spot, to determine between the positive Assertions of the several Authors, and to tell us,

whether if these Insects do sometimes lodge this Matter on other Substances, they do not first collect it from the Jujube Tree here mentioned, we must rest in Uncertainty. Whatever may be the true History of this Drug, however, its Virtues are less in Dispute, it is an Attenuant, Aperient, and Diuretic, and is sometimes prescribed in Disorders of the Liver and Spleen, and in Jaundices and Dropsies. It would probably be in more use if we knew how to open its Body, so as to make it exert its Virtues. It is a Sort of unchangeable Medicine passing the Body very little altered, if given in Substance, and it is of the Number of those Things from which a Tincture is very difficultly extracted.

CHAPTER VII.

SANGUIS DRACONIS,
Dragons Blood.

THIS is a Drug of the Class of the dry or solid Resins, though so oddly named as to seem to have at some time or other been imagined an animal Production; and we have indeed Accounts too authentic of some having been so absurd and ignorant as to suppose it so.

It is a moderately heavy Resin of a friable Texture, and of a dusky red Colour on the Surface, and indeed throughout the Mass while whole, but where powdered it becomes of an extremely bright and glowing scarlet Colour. It is naturally very dry, but it easily melts over the Fire, and is inflammable, diffusing a very singular and not disagreeable Smell while burning. If broke into small Pieces and held up against a strong Light, it is somewhat transparent. It has very little Smell, and is of an austere, resinous, and astringent Taste.

We have two Kinds of *Sanguis Draconis* in the Shops; the one Sort is very firm and compact, and is brought to us in Lumps of an Inch long or somewhat more, and about half an Inch in Diameter. These are wrapped up in certain long and narrow Leaves of a yellowish green Colour, and are called Drops or Tears of Dragons Blood. The other is brought to us in larger Masses or Cakes of an irregular flattish Figure. This is less compact than the former, and less pure; being usually fouled with Fragments of Sticks, Leaves, &c. and sometimes with Earth. This is much more friable and less resinous than the former, it powders more easily, but the Powder is not of so bright and fine a Colour. This is called common Dragon's Blood, and is greatly inferior to the former in Value.

Beside these two common Kinds of Dragons Blood, we sometimes meet with a third, which is soft, and will take an Impression from the Finger. This is very tough and viscous, and of a fine deep Blood Colour. It has the Smell and Taste of the finer dry Kind, and in keeping, it by Degrees grows hard and wholly like it. These three are all genuine *Sanguis Draconis*; but we are carefully to avoid a counterfeit Sort that is sometimes offered to Sale, and is made up of several different resinous Matters melted into a Mass, and coloured with the true *Sanguis Draconis*, or with *Brasil* Wood; this is of no value. The Dragons Blood in Drops, or the first Kind described is always to be preferred to any other.

The

The ancient *Greeks* were acquainted with this Drug; but they called it by a Name which has since been applied to a very different Substance; and hence has arisen great Confusion. This Name was *Cinnabaris*, a Name which not only since has been applied to a Mineral, the Ore of Quicksilver, but which was also used by many Writers of their own Time for that Purpose also. So old an Author as *Theophrastus* mentions the red Ore of Mercury under the Name of Cinnabar, and it seems that this Refin had only the same Name given it, because it approached to the Mineral Cinnabar in Colour. The later *Greeks* called it *Aima Dracontos*, that is *Sanguis Draconis*; and there were not wanting some who believed it was the real Blood of Dragons shed in the Combat of that imaginary Creature with the Elephant; and concreted as it lay on the Ground. The *Arabians* have described it under the Name of *Alachnen*. We are very well assured at present that this Drug is a vegetable Refin; but it is somewhat singular that there are four different Vegetables which afford a red Juice, which when dried is so much the same from all, that it is all indiscriminately sent over to us under the Name of *Sanguis Draconis*.

The first of these is that Species of Tree described by *Clusius* and others, under the Name of *Draco Arbor*, and *Palma prunifera foliis Yuccæ quæ Sanguis Draconis Officinarum*. This is a tall and beautiful Tree. Its Trunk is naked in the lower Part, but near the Top is ornamented with regular Branches. The Leaves are like those of our Iris's, and the Fruit round and near half an Inch in Diameter. This Tree grows in the *Canaries*, and the *Sanguis Draconis* naturally exsudates from the Cracks of the Bark of it in the great Heats. *Commelin* has described this at large in his *Hort. Amst.*

The second of them is described by *Dale* in the Supplement of his *Pharmacologia*, and named by Consul *Sherard* *Palma Amboynensis foliis et caudice, undique Spinis longis, acutissimis nigris armata*; and in the *Historia Oxoniensis arundo sarcta Orientalis Sanguinem Draconis manans*. This grows to six or eight Feet high. Its Stem is as thick as a Mans's Arm: The Leaves of this are long, narrow, and encompass the Stalk at their Base. The Fruit is roundish, and of the Size of a Hazel Nut. The *Sanguis Draconis* that is the Produce of this does not flow from the Trunk, but is procured by the *Javanese* from the Fruit, by boiling, or by macerating it in the Vapour of hot Water.

The third is the *Sanguinis Arbor* or *Ezquabuitl* of *Hernandez*. This is very different from both the former. It is a large tall Tree, and has Leaves like those of Mullein, angular and pointed. This grows in new *Spain*, and a true and genuine *Sanguis Draconis* flows naturally or by Incision from the Trunk.

The fourth and last is yet more different from them all. It is described by *Commelin* under the Name of *Draco Arbor Indica siliquosa Populi folio Angsana sive Angsava Javanensibus dicta*. It grows in all Parts of the Island of *Java*, and even in the Town of *Batavia* there. Its Bark is red: Its Leaves are about two Inches long and scarce half an Inch broad. Its Flowers are small, yellow, and of a bitterish Taste. The Fruits stand on long Pedicles, and each contains about three Seeds. *Monardes* tells us, that the Figure of a Dragon is to be seen in the Fruit of the true Dragon Tree; and *Commelin* observes that this is probably the Tree he alludes to in that whimsical Assertion; for that when the outer Integument of these Seeds is taken off, there are certain irregular Lines seen running about the Fruit, which a fanciful Person may easily form the

Figure.

Figure of any Animal he pleases from. The Trunk and large Branches of this Tree, when wounded, readily yield a red resinous Juice, which soon hardens in the Air, and is wrap'd up in Leaves and sent into *Europe*: This seems to be our finest Dragon's Blood in Tears or Drops.

Sanguis Draconis is not soluble in Water, but in oily Substances, or Spirit of Wine: If burnt the Fume it yields is of an acrid Nature like that of Benjamin. It is a very powerful Astringent, Incrassant, and Dryer: It is given with great Success in Diarrhœas, Dysenteries, and Hæmorrhages of all Kinds; and is much commended externally for drying and healing old Ulcers. Its Dose is from five Grains to twenty-five, but it is rarely prescribed singly; it is joined with the common Astringents in Diarrhœas, and for violent Hæmorrhages, with common Alum.

CHAPTER VIII.

CAMPHORA, Camphire.

CAMPHIRE is a very singular Substance, it more properly belongs to the Class of solid Resins, than to any other Part of the *Materia Medica*, yet it differs in many things from all the rest of these. We meet with two Kinds of Camphire in the Shops, differing in Regard to the Degree of their Purity: These we distinguish by the Name of rough, and refined Camphire.

The rough Camphire is brought to us in large flattish Cakes of an irregular Figure; these are not very compact, but easily crumble to Pieces; they are moderately heavy, and of a greyish or dusky reddish white in Colour; they are composed of certain small Granules loosely connected together, and are of a very quick and pungent Smell, and an acrid Taste.

The pure or refined Camphire is a fine, delicate, and pure Resin, of a perfectly clean white Colour, very bright and pellucid, moderately compact in its Texture, somewhat fattish to the Touch, and growing softish and tough under the Teeth. We generally meet with it in thin Cakes, hollow'd, and of an orbicular Figure, which they assume from the Form of the Cover of the Vessel they were sublim'd in. This refin'd Camphire is of the same Smell and Taste with the rough, but it is more acrid and pungent: It inflames the whole Cavity of the Mouth on chewing only a small Piece of it, and yet at the same Time impresses a Sense of Coldness on it: Its Smell is somewhat like that of Rosemary, but vastly stronger: It is more volatile than any other of the vegetable Resins, insomuch, that if left exposed to the open Air, it will by Degrees fly wholly off: It also is very inflammable, and when once set on Fire, burns wholly away without leaving any Remainder.

The rough Camphire is not fit for medicinal Use, but the refined only is to be admitted into the Shops, and that is to be perfectly white, clear, and pellucid, which are the Proofs of its having been well refined.

Camphire was unknown to the antient *Greeks*: The *Arabians* have described it under the Name of *Caphur*, and the modern *Greeks*, *Aëtius* and the rest, under that of *Caphoura*. It is brought to us from *Japan*, and the adjacent Islands; it is all of it sent over rough into *Europe*, and the *Hollanders* are the People who refine the greatest Part of it.

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The *Indians* distinguish two Kinds of Camphire, a finer, and a coarser; the finer is the Produce of *Borneo* and *Sumatra*, it is rare, and of a great Price among themselves, and is never sent into *Europe*; the coarser is the *Japonefe* Kind, which is the common Kind both in the *Indies*, and in *Europe*.

The Tree which produces our Camphire is one of the *Enneandria Monogynia* of *Linnaeus*, and one of the *Arbores fructu Calyculato* of *Ray*. It is described by *Breynius* in his *Prodrum* under the Name of *Arbor Camphorifera Japonica foliis laurinis fructu parvo globoso Calyce brevissimo*, and by *Linnaeus* in his *Hortus Cliffortiana*, under that of *Laurus foliis ovatis, utrinque acuminatis, trinerviis nitidis, petiolis laxis*.

It is indeed truly a Species of Bay Tree, but it grows to the Height and Size of our Oaks: The Trunk is thick, and its Bark greyish and crack'd; that on the younger Branches is green and smooth. The Wood is white, and of a lax Texture; it becomes a little reddish in drying, and is variegated with black in the manner of the Walnut-Tree; it is also of a very agreeable and pungent Smell: The Leaves are like those of the common Bay, but longer and somewhat narrower; they end in a narrow Point, and are curl'd about the Edges; these when bruised smell strongly of Camphire, as does also every Part of the Tree: The Flowers stand in Clusters, on Pedicles that arise from the *Axæ* of the Leaves, they are small and white; these are succeeded by Berries of a round Figure, as big as a small Pea, standing in little Cups, and of a middle Taste between that of Cloves and Camphire. Every Part of this Tree abounds with Camphire, but it is not collected from it in the manner of the other Resins, but by a sort of chemical Process. The Natives of the Places where the Trees grow, cut the Wood and Roots into small Pieces, and put them into large Copper Vessels, which they cover with earthen Heads fill'd with Straw; they give a moderate Fire under them, and the Camphire is raised in Form of a white downy Matter and retained among the Straw; when the Process is over they shake it out of the Straw, and knead it with their Hands into Cakes, which are what we call rough Camphire.

The *Dutch*, who refine this Camphire, beat these Masses to a rough Powder, and sift them through a coarse Sieve, by which means they free them from the coarser Foulnesses that were mix'd among the Camphire; they put two or three Pound of this powder'd Matter into a flat glass Vessel with a narrow Neck, they then place the flat Bottom of this Vessel upon Sand, but they do not raise the Sand about it. The Sand-Furnace used for this Purpose, is of a peculiar Structure; the Vessel which holds the Sand is of Iron, and its Figure is that of an inverted Cone; they make a Fire about the lower narrow Part of it, which they encrease, till the Camphire in the Glass boils like Water; they hang Cloaths over the Body of the Vessel while the Camphire melts, and cover its Top with a loose Cone; when the Camphire boils thoroughly they take off some of the Coals, and throw Ashes over the rest to diminish the Fire, and in this moderate State they keep it half an Hour; they then take off the Rags and the Cone, and only hang on a Piece of brown Paper pierced in the Middle in the same manner as the Rags were, to let it fall over the Neck to the Body of the Vessel; they then put a Paper Cone over the Mouth of the Vessel, and in this State they keep it over a gentle Fire for some Hours, keeping the Heat up to such a Degree that the Camphire still remains in Fusion; by this Part of

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the Process the Camphire is divested of a thin Oil, and some other of its less firm Parts, and becomes capable of concreting into a harder Mass that it otherwise could.

After two or three Hours continuance of the Heat in this State, they encrease the Fire, and raise it to that Degree that the Camphire begins to rise towards the Top of the Vessel; great Caution is required, at this critical Time, in the Management of the Fire, to prevent the Camphire's rising too suddenly into the Neck of the Vessel, and filling and bursting it. They not only are careful of the Degree of Fire on this Occasion, but they continually thrust down an Iron Instrument through the Neck into the Body of the Vessel to keep a clear Passage; the Camphire by Degrees rises wholly to the Top of the Glass, they then let the Fire go out and the Vessel cool; when cold they break it and take out the Camphire, which is found in Form of a Cake, adhering to the upper Part of the Vessel and conforming to its Shape; if there were any Foulnesses left among the Camphire after the sifting, they are found at the Bottom of the Vessel, the Camphire is pure at the Top, and is what we see in the Shops.

The *Borneo* and *Sumatra* Champhire, so much esteem'd in the *Indies*, is very like ours, but it differs in Form, consisting wholly of little *Micæ*, or Spangles of a bright silvery Colour, or of thin and flat Flakes or Scales. The Tree which produces it is of a different Genus from that whence we have our Camphire. It is call'd by *Breynius* in his *Prodromus*, *Arbor Camphorifera Sumatrana, foliis Caryophylli aromatici longius mucronatis fructu majori oblongo, Calyce amplissimo Tulipæ figuram quodammodo representante*. It much resembles the common Camphire Tree in its external Form, but it is smaller: Its Trunk is slender, jointed like a Reed, and full of a Pith like that of Elder: Its Wood is slight and spungy: Its Fruit is very different from that of the former, being of the Bigness of a small Filbert, of an oblong Figure, and cover'd with a thin Rind; over which it has, in the manner of the Filbert, a large Cup which covers it, and which resembles the Flower of the Tulip in some Degree, being variegated with red, yellow, and green, and making a very beautiful Appearance; this opens at the Top and discloses the Fruit, which is of a very agreeable Taste, but has a slight Flavour of Camphire. The Islands of *Borneo* and *Sumatra* produce this Tree, the greatest Plenty of it is in the Woods towards the *Western* Coasts of the latter Island.

They do not boil the Wood of this Tree for the Camphire, but they find it in Form of a solid Resin concentered in different Parts of the Tree, in the thin Flakes and Spangles above mentioned. It is not every Tree that is in a State to produce the Resin in this manner. The Natives guess which, as they stand, seem most likely to have it, these they fell and cut, and split to Pieces, picking out the Camphire wherever they find it: This Camphire has not the Property of evaporating of itself, on being exposed to the Air, as our Camphire has: It is highly esteem'd, and sold on the Spot at a vast Price.

Camphire fir'd in the open Air affords a small Quantity of a black Smoak, which has however nothing acid in the Smell, and in this it differs from Benjamin, and many other of the Resins: If distill'd in close Vessels it is not separated into its Principles, but rises wholly into Flowers in the manner of Sulphur: It dissolves very readily in rectify'd Spirit, and in oily Liquors, as the other Resins do; but after Solution in Spirit, if the Liquor be debas'd by
adding

adding Water to it, the Camphire separates, and rises in its own Form to the Surface like Flocks of Wool, or Fleeces of Snow. One very singular Property Camphire has, which is, that it is dissolved by Aqua Regia, Spirit of Nitre, or the other strong Acids, which shews its Difference from all the other Resins, for they are all indurated by these Liquors. It will be dissolved also by concentrated Oil of Vitriol, but in this Solution it is not form'd into an Oil; it melts also in Spirit of Salt, and partly runs into a thick and tough whitish oily Fluid, and in part is sublim'd: The fix'd and volatile Alkalis, as Salt of Tartar, and Spirit of Sal Armoniac, have no Effect upon it; whence, as from many of the other Experiments, it appears to be very different from all the other Resins.

There have been great Disputes among the medical Writers on the Subject of the Virtues of Camphire, some have declar'd it to be cold, others hot; they argue for its being cold from its abating Venery, and being good against Inflammations of the Eyes; those who argue for its being hot produce in their Favour its acrid Taste, its fragrant Smell, its Inflammability, and the great Subtlety and Volatility of its Parts.

The Opinion of its being an Enemy to Venery, has been very universally received, and its Vapour has been declared sufficient to disable Men: But a thing is not the more true for being generally received: The Workmen in the *Indies* who prepare the Camphire, and those whose sole Employ in *Holland* is in the Houses where it is refined, seem as much addicted to Venery as other Men, and have generally Families of Children: It is affirm'd indeed, that among the People who have taken Camphire by way of extinguishing those Desires, some have succeeded, but it is not less certain, that others have complained of greater Excesses of their Desires that Way, from the taking it, than they had before. Camphire, upon the whole, seems of the number of those which we call hot Medicines, and wherever it has been observ'd to act as a cooler, it may be found to have been only by Accident, by attenuating and resolving the Humors, which stagnating, caused Inflammation, and therefore occasioning the going off of the Heat and Pain by taking away the Cause; not by acting itself as a cooler, which is an Effect that we daily experience from other Medicines of the hotter Kind, as Spirit of Wine, &c.

Camphire is at present much used in Medicine, both internally and externally; internally it is anodyne and diaphoretic, and a great Resister of Putrefaction: It also promotes the Menfes and Urine, and is good in Ulcerations of the Kidneys and Bladder: It is by some greatly recommended also in the *Fluor Albus*, and in Gonorrhœas; at present it is often given in violent Deliriums, and even in Madness itself, and also in hysteric Complaints: Its Dose is from two or three Grains to a Scruple. Externally it is used in Pains of the Limbs, in Erysipelas's, and even to abate Inflammations of almost all Kinds, under proper Management: It is also an Ingredient in many of the Shop Compositions.

Beside this Camphire, there is a similar Substance drawn from many of the *Indian* Trees and Plants, much resembling it in Appearance, and in its Virtues. The Island of *Ceylon* abounds in Cinnamon Trees, and the Natives make a large Quantity of a kind of Camphire from them; they strip off the Bark of the Roots of these Trees, and put it into an Alembic with a large Quantity of Water; they distil this in the common Way, and the Camphire is found

concreted at Top of the Water ; this is call'd Cinnamon Camphire, it has a Fragrancy greatly superior to the common Camphire, and is said to excel it in its Virtues, but little of it is made however, and that is sold at a large Price. In the same manner different Kinds of Camphire may be made from all the Species of the Canella, from the Root of the *Ceylon* Zedoary that smells of Camphire, from the *Ceylon* Mint, from Schænanth, and many other Plants, nay from our own Sage, Thyme, and several other of the *European* Aromatics, but these in general are obtained at best but in very small Quantities, and are most of them greatly inferior in Virtue to common Camphire.

Of SOLID RESINS,

Less frequently used in MEDICINE.

CHAPTER I.

ANIME.

THE Anime of the Shops is of the number of those dry Refins, which are very improperly call'd Gums, what is call'd Gum Anime being a friable Substance, inflammable, and soluble in Oil, which are Characters of a genuine Resin, and such as no Gum can possess. We are to observe also, that there is another very frequent Error in Regard to this Drug, which is, that many call it Copal, and confound it with another Resin, improperly call'd also a Gum, and known by that Name. Copal is indeed a Term used by the *Indians* in a very large Sense, and sometimes as a generical Name for all the scented Refins ; but with us it is never used so, nor has any good Author used it as a Term synonymous with Anime: It is the Name of a distinct Resin to be treated of in its Place.

The *Spaniards*, according to *Hernandez*, used the Term Copal to distinguish all the white, or whitish sweet scented Refins ; and the Term Anime, which they also made generical, to express all the brown ones : After this the Name Anime became attributed to a peculiar Resin, of a sweet Scent, and of a brownish yellow Colour, brought from the *East*, or rather from *Ethiopia* on the Confines of *Arabia* ; and finally after this, the *Portuguese* gave it also to certain sweet Refins which they found in the *Brazils*, and esteem'd somewhat of the same Nature with the *Ethiopian* Anime.

On this Distinction has been founded the Name of *Oriental* and that of *Occidental* Anime, long known in the Shops, and distinguishing two different Refins at this Time found there, though neither very frequently.

The *Oriental* or *Ethiopian* Anime, call'd by the *Portuguese* *Animum* and *Animum*, and in the Shops Gum Anime, is a dry and solid Resin, brought to us in large Cakes or Masses, of an irregular Figure, and of a very uncertain Colour ; some of them are greenish, some reddish, some brown, and some of the Colour of Myrrh ; they all agree in this however, that they are moderately pellucid,

pellucid, of a tolerably compact Texture, light and easily powdered, of a fragrant Smell, very inflammable, and of a resinous and somewhat bitter Taste. This which is the genuine and true Anime is now very rare in the Shops. It is brought, as *Garcias* informs us, only from *Æthiopia*, but the *Occidental* Kind, or Refin of the Courbaril, is what is universally received in its Place. It has been supposed by many, that this *Æthiopian* or true Anime was known to the ancient *Greeks*. Some have supposed that *Dioscorides* meant this Refin by the Name of *Myrba minia*, and many Arguments have been advanced in Favour of the Opinion; but the Refins themselves are so like one another, and the Descriptions the *Greeks* have left us of them so short and imperfect, that it is impossible to affirm any thing on this Head with any tolerable Degree of Certainty. We are not yet informed what the Tree is that produces the *Æthiopian* Anime. *Herman* is of Opinion, that it is the same that yields the *Occidental* Kind, only growing in a different Climate, but this is no more than a Conjecture.

The *Occidental* Anime is a whitish, dry, and solid Refin, somewhat resembling Frankincense in Colour. It is often of a fine yellowish white, between that of Frankincense and Mastich, and in the purest Pieces is very clean and transparent; in general however it is much inferior to the *Oriental* in these Respects. It is moderately heavy, friable, and somewhat oleaginous to the Touch. It is extremely fragrant, especially when burnt, and is of a resinous, acrid, and somewhat bitterish Taste. It is brought to us from many Parts of *America*, particularly from new *Spain* and the *Brazils*. The Natives call it *Joticica* and *Jetaicica*. Our People from their Name of the Tree vulgarly call it Refin of Courbaril.

Whatever might be the Case in regard to the *Æthiopian* Anime, we may be very well assured, that this was not known to the *Greeks*. The Tree which produces it is one of the *Arbores siliquosæ* of Mr. Ray. It is described by *Caspar Baubine* under the Name of *Arbor siliquosa ex Virginia lobo fusco scabro*, and by *Plumier* under that of *Courbaril bifolia flore pyramidato*. It grows to a very great Height; its Wood is solid and of a fine Grain, of a reddish Colour and very durable, and serves them for many of their better Works. The Leaves are like those of our Bay Tree but thicker, and they grow constantly two together on every Stalk; they are of a shining green, and if held up to the Light seem to be perforated with innumerable little Holes in the Manner of the Leaves of St. John's-wort. The Flowers stand in Clusters or Tufts towards the Tops of the Branches; they are of the papilionaceous Kind, like those of our Vetches, and of a purplish Colour: These are succeeded by a Kind of Pods six Inches long, and an Inch and half broad, compressed sideways, and raised into two Ridges on the Back. This Fruit when ripe does not open lengthwise into two Valves, as the Generality of Pods of this Shape do; it remains entire, and contains in it among a Multitude of irregular Fibres four or five Seeds larger than the common Pine-Kernels, otherwise like them. This Tree is common in most Parts of *America*, and the Fruit ripens in *May* and *June*, when it falls from the Trees, and is picked up by the Natives, who are fond of the farinaceous Substance that is among the Fibres within it. The Trunk of the Tree exudates the Refin here described in very considerable

able Quantity without being wounded for it; the finest Lumps of it are white or of a pale yellow, and much resemble Amber.

The *American* Anime, analysed by Distillation in a Retort, yields first a small Quantity of a limpid Phlegm of a subacid Taste, and of a Smell not disagreeable, but much resembling that of Oil of Juniper; after this a small Quantity also of a reddish Liquor more acid than the former, and then of a brown Liquor of an empyreumatic Smell; after these there comes over a moderate Portion of a fine yellow pellucid Oil, and then a thick and brown one like Butter, in so large a Quantity as nearly that of two Thirds of the Weight of the whole. The Remainder in the Retort is but in very small Quantity, and after Lixiviation, yields, with the utmost Care, only about four Grains of a fixed Salt, and that of the *Sal Salsus*, not the alkaline Kind, from the Pound.

The Natives of *America* use this Resin in Fumigations for the Head-ach, and for Diseases of the Breast and Lungs. They also use it externally dissolved in Oil as a Liniment, and in Spirit of Wine as an Embrocation for Pains in the Limbs.

CHAPTER II.

COPAL.

THE Copal of the Shops is truly a Resin, being inflammable and soluble in Oil, but it has the Fate of the Anime and some other Bodies of this Class to be miscalled a Gum. It has been observed in the preceding Chapter, that the Anime and Copal are by some confounded, and the two Names used as synonymous, and that the *Americans* use the Word Copal in a much larger Sense, expressing by it all the scented Resins; and the *Spaniards* of that Part of the World, as many of them as are of a whitish Colour.

Beside these larger and less distinct Senses, the Word Copal is however used in the Shops as the Name of a distinct Resin, and as such is to be considered in this Place. The true Copal is a solid Resin of a considerably firm Texture. It is brought to us in moderately large Masses, or in single large Lumps or Drops. These last are the purest Copal, and are usually very clear and transparent, of a watery Colour, or of an extremely pale yellow. They greatly resemble Amber in Appearance, and if there were any such thing as Amber of this limpid Hue, they would not be easily distinguishable from it. This Resin is of a fragrant Smell, especially when fresh broken, or when burnt. Its Taste is subastringent and somewhat aromatic.

There are several Trees in *South America*, which produce a Resin so like in all Respects that it is indifferently collected from them all, and sent to *Europe* as well as used upon the Spot under the Name of Copal. *Hernandez* has enumerated and described no less than eight of these Trees; there is one however which yields the Resin in greater Plenty, and in a greater Degree of Purity than the rest, and is therefore generally called the true Copal Tree. This is described by *Hernandez* under the Name of *Copalli Quabuitl*, and *Copallifera prima*. It is a tall and large Tree with Leaves not unlike those of the *European* Oak, but somewhat longer, its Fruit is round and of a purple Colour. The Trunk of this Tree

Tree yields the Copal sometimes spontaneously, but more plentifully when wounded for that Purpose.

Copal, by a chemical Analysis, is found to yield first a moderate Quantity of an acid reddish Phlegm, of an empyreumatic Smell; and after this a moderate Portion of a yellow, thin, and transparent Oil, then a larger Quantity of a reddish and somewhat thicker Oil; and after this a very large Proportion of a thick blackish Oil like Butter. The Remainder in the Retort, after these several Liquors are come over, is not more than an eighth Part of the Resin first put in; and this calcined in an open Fire, is reduced to a much smaller Quantity; after which, by Lixiviation, it yields about four Grains of fixed Salt from the Pound of Resin originally employed, and that is not of the alkaline but of the *Sal Salsus* Kind. The *Americans* use Copal as they do Anime for Disorders of the Head, by Way of Fumigations. We do not use it at all in Medicine, but an excellent Varnish is made of it.

CHAPTER III.

CARANNA.

CARANNA is a vegetable Product, by some, like the two former, called a Gum; but its Inflammability and Solubility in Oil or other unctuous Substances, prove that it is truly a Resin. It is a dry and friable Resin as we usually meet with it, but when fresh it is somewhat soft, and will receive an Impression from the Finger. It will remain of this Consistence a Twelvemonth, or if properly kept much longer, but afterwards it becomes as firm and solid as any of the other Bodies of this Class. It is brought over to us, rolled up into little Masses of a cylindric Figure, and covered with the Leaves of a Plant of the Rush Kind. It is of a dark greyish Colour, almost black on the Surface, and when broken appears of a dusky brown within. It is of a somewhat fragrant and aromatic Smell when fresh broken, but much more so when thrown on burning Coals, on which it melts and flames diffusing a very grateful Odour throughout the Room. Its Taste is resinous, aromatic, and has somewhat of the peculiar Bitterness of Myrrh in it. It is to be chosen clean, of a dark Colour and bitterish Taste. It is brought to us principally from new *Spain*. *Monardes* tells us of a Kind of *Caranna* very fine, and as pellucid as Crystal. *Geoffroy* observes that this Kind is not met with in our Shops. But from the whole that *Monardes*, who has mentioned it in two or three different Places, says of it, it appears that he meant no other than the finest Kind of Copal by that Description.

The Tree which produces the Caranna is described by *Hernandez* under the Name of *Flabucliloca Quahuatl, id est arbor insanie Caragna nuncupata*, and by *Monardes* under that of *Caranna*. It is a large and tall Tree, full of Branches, covered with a yellowish brown Rind. Its Leaves in Shape resemble those of the Olive, and its Fruit according to *Herman* is round, and resembles a small Apple.

This Resin affords by Distillation a fine, thin, limpid, and odoriferous Oil, which is esteemed, as well as the Resin itself, a very powerful external Remedy in Cases of Pain, Tumours, and Wounds of the Nerves. It is even used
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by some in the Gout and Sciatica. it is made into a Plaister with the Addition of *Chio* Turpentine and Oil of Mace, which is applied to the Stomach in Cases of Indigestions, and to the Head for the Cure of inveterate Pains there, but with how much Success we are not able to say.

CHAPTER IV.

TACAMAHACCA,
Tacamahac.

TA C A M A H A C is another of the Resins, improperly called by the Name of a Gum in the Shops. It is a tolerably solid Resin of a very fragrant and peculiar Smell: It is divided by the Druggists into two Kinds, the one called the Shell Tacamahac, which is the finest, the other, which is an inferior Kind, Tacamahac in Grains, or rough Tacamahac.

The Shell Tacamahac is a concreted Resin, of a fatty Appearance, and somewhat soft, so as easily to receive an Impression from the Finger; at least this is its State when tolerably fresh. In Time it grows hard and friable as common Resin, but it is then to be rejected as having lost great Part of its Virtue. It is of a pale brownish white Colour, sometimes with a yellowish, sometimes with a greenish Cast. It is moderately heavy, very inflammable, and of an extremely fragrant Smell of a peculiar Kind, in which something like the aromatic Scent of Lavender and the Perfume of Ambergrease may be distinguished as mixed with a resinous Flavour. Its Taste is very aromatic and agreeable, though considerably acrid. It is sent over to *Europe* in the Shells of Gourds or Calabashes, and thence has the Name of Shell Tacamahac, but it is at present scarce any where to be met with in the Shops.

The common or Grain Tacamahac, called also coarse Tacamahac by way of Distinction from the former fine Kind, which is called *Tacamahaca sublimis* by some, is a dry, but somewhat fattish Resin, sent over to us either in loose Granules, or in Masses formed of such. It is of a whitish Colour, variegated with yellowish, reddish, or greenish. Some of the Granules are simply of one or other of these Colours; others are variegated with two or more of them. It is of a fragrant Smell resembling that of the Shell Tacamahac, but less perfumed, and is of an acrid, aromatic, and bitterish Taste. The Ancients were wholly unacquainted with this Drug. We owe the Discovery of it to the *Spaniards*, who first sent it into *Europe* from their Dominions in *America*. Since which Time it has been found also in other Parts of *America*, and in the Island of *Madagascar*.

The Tree which produces Tacamahac is described, though but imperfectly, by many of the botanical Writers. *Caspar Bauhine* calls it *Arbor populo similis resinosa altera*, *Hernandez Tecomabaca*, and *Plukenet Tacamahaca foliis Crenatis ligno ad Ephippia apto*. It is a tall Tree, in the Manner of Growth much resembling the Poplar. Its Leaves are broad, serrated at the Edges, and terminate in a sharp Point. The Flowers have not yet been described, but the Fruit is said to grow on the Summit of the Branches, and to be small, roundish, and of a brown Colour, containing a Kernel not unlike that in the Peach Stone. This Tree in the great Heats naturally exsudates a fine whitish

Resin

Resin in large Drops ; this is the finest and most fragrant Tacamahac. The Natives wound the Bark also in several Places, and from these Incisions procure a large Quantity of the Resin, but of an inferior Value.

Tacamahac, distilled by the Retort, yields first a fine fragrant Phlegm, of a subacid Taste, and afterwards more which is less scented and more acid, the Quantity of the whole amounting to nearly two Ounces from the Pound ; after this there comes over about half that Quantity of a fine pellucid and fragrant reddish Oil ; then a thick brown Oil like Butter in no less Quantity than six Ounces or more from the Pound ; and after this a smaller Quantity of a yet thicker and darker Oil. The remaining Matter in the Retort is small in Quantity, not more than an Ounce and a Quarter from the Pound ; this afterwards calcined in an open Fire is reduced to half a Dram in Weight, and from this not the least Particle of fixed Salt can be drawn by Lixiviation.

Tacamahac is greatly commended by some in Disorders of the Breast and Lungs : At present it is very rarely used internally : But externally it is in Repute for softening the Tumors and mitigating Pain. It is spread on Leather, and laid behind the Ears to cure the Tooth-ach, and to stop Defluxions on the Eyes, and to the Navel to relieve Women in hysterical Complaints. Applied in the same manner to the Region of the Stomach, it is said to assist Digestion, dispel Flatus's, and promote the Appetite. It is also an Ingredient in some of the Compositions of the Shops.

CHAPTER V.

LADANUM,
Labdanum.

LABDANUM, or Ladanum, as it is variously written, is a Resin of the softer Kind, though too firm in its Consistence to be ranked among the fluid ones. We meet with it of two Kinds in the Shops, the one in Cakes or Masses of an irregular Figure, the other twisted up into a Sort of oblong Rolls. The Ladanum in Masses of irregular Figure is usually of so soft a Consistence as to receive an Impression from the Finger, or at least so soft as to give way upon Pressure ; and it grows yet softer and more ductile as it is handled. It is of a dark Colour, approaching to blackish, considerably heavy, of a tough Consistence, of a strong and not unpleasant Smell, and of an aromatic but not very agreeable Taste. This Kind is usually sent over to us in Bladders, or carefully wrapped up in Leather to preserve it in its genuine soft Consistence, and to prevent the Evaporation of its finer Parts.

The Ladanum in Rolls is very different from, and much inferior to this. It is dry and hard, but if held to the Fire it softens a little. Its Colour is darker than that of the other Ladanum, and its Smell of the same Kind, but much more remiss in Degree. This is the Ladanum most frequent in the Shops, but it is foul, often containing Sticks and Straws, and often Dirt and Sand, and is greatly inferior to the former in its Virtues.

Ladanum is to be chosen soft and moist, of a strong Smell, pure and free from accidental Admixtures, very inflammable, and diffusing a fragrant Smell while

while burning. It is brought to us from the Island of *Crete* and some other of the neighbouring ones.

The *Greeks* were very well acquainted with Labdanum, they called it *Ladanon*, and the *Arabians* make frequent Mention of it under the Name of *Laden* and *Loden*. The Shrub which produces it is one of the *Polyandria Monogynia* of *Linnaeus*, and one of the *Herbæ pentapetalæ foliis in Caule ex adverso binis* of *Ray*. It is of the *Cistus* Kind, and is described by all the late botanical Writers under the Name of *Cistus Ladanifera Cretica flore purpureo*. It is a low Shrub spreading itself on the Ground and rarely rising to more than two Feet in Height. Its Root is a Foot or more in Length, white, woody, and covered with a reddish Bark. Its Leaves are of a dusky green Colour, of an oblong Figure, and notched at the Edges. The Flowers stand on the Tops of the Branches, and are of a fine purple Colour, as large as a small Rose, but single. The Seed-Vessel that succeeds these is divided into many short Pods.

The Ladanum of the Shops is a resinous Juice, which exsudates from the Leaves of this Shrub. It was collected in the Time of *Dioscorides* in two different Ways; the Goats which fed on the *Cistus* used to come home with their Beards and Legs loaded with it, as they had rubbed it from the Plant; and this the People who had the Care of them used to take off with proper Instruments, and to put up in Vessels for Sale. The other Way was to draw Ropes and other Things over the Shrubs, and afterwards to collect the Labdanum that had adhered to them. The People who had traded in this Drug, used therefore always to distinguish two Kinds of it, that collected from the Beards and Legs of the Goats, and that immediately from the Shrub.

Of later Times however, all the Ladanum is collected in one Way, which *Bellonius* described when on the Spot, and which *Tournefort*, when afterwards there, confirmed. They make a Kind of wooden Rake but without Teeth, and to this they fix a Number of long Thongs of untanned Leather. With this Instrument they collect the Ladanum during the Heats of the Day, by drawing it several Times over the Shrubs. They afterwards scrape off the Resin from these Thongs, and put it up for Use. The proper Season for this Business is in the Dog-Days in the serenest Weather, and when there is no Wind. It is an intolerable Fatigue to be upon the Mountains exposed to such Heats; the Peasants only undertake it; but they are well paid for it, since a good industrious Fellow will collect three Pound Weight or more of Ladanum in a Day. If it is collected in windy Weather, it is of much less Value, as it is always full of Dust and Foulness: What is collected pure is indeed seldom sold so, the Peasants who sell it by Weight to increase their Profit, usually mixing a Quantity of a dusky coloured heavy Sand among it.

Ladanum, distilled by the Retort, yields first a little more than an Ounce from the Pound, of a reddish Phlegm, of an agreeable Smell, and of an acid Taste; after this comes over about a fourth Part of that Quantity of a brown alkaline Liquor; then much about the same Quantity with the last, of a fine, pellucid, reddish Oil of a very fragrant Smell; then three times as much of a brown empyreumatic Oil. The Mass remaining in the Retort after this, is vastly greater than that usually remaining after the Analysis of Bodies of this Kind. This calcined in an open Fire is soon diminished to a much smaller Quantity; but this when examined proves to be only the Sand that had been

been mix'd with Ladanum, and not the least Particle of fix'd Salt, of any Kind, can be obtained from it by Lixiviation. The Quantity of Sand thus discovered among the Ladanum, is often not less than twelve Ounces in the Pound in the twisted Ladanum; in the finer Kind it is in much less Quantity, but even there very considerable.

The *Grecian* Women are very fond of Ladanum, they make Balls of it with a small Mixture of Ambergrease, which they carry about them by way of Perfume. In Medicine it is used externally, to attenuate and discuss Tumors: Internally it is more rarely used, but it is greatly extol'd by some against Catarrhs, and in Dysenteries: Its Dose in these Cases is from five grains to thirty: It has been made an Ingredient in several of the old Compositions of the Shops, but is at present much disused.

C H A P T E R VI.

RESINA SANDARACHA,
Sandarach Resin.

BEFORE we enter on the History of this Resin, we are to observe, that there are two other very different Substances, call'd by Authors by its Name; the one a mineral, the other an animal Production; the mineral Sandarach is an inflammable Fossil of the Orpiment Kind, and call'd by some red Orpiment; this has been described in its Place. The animal Substance, call'd by this Name, is a Matter found in the Hive of Bees, and at this Time known by the Name of Bees Bread. The vegetable Resin, call'd Sandarach, is a dry and hard Resin: We usually meet with it in loose Drops or Granules, which are of the Bigness of a Pea, or a Horse-Bean, or larger; of a pale whitish yellow in Colour, transparent, and of a resinous Smell; brittle, very inflammable, and diffusing a very pleasant Smell while burning; in Taste it is somewhat acrid and aromatic. It is soluble in Spirit of Wine, or in oily Substances: We receive it chiefly from the Coast of *Africa*.

The Tree which produces it is one of the *Diacia Monodelphia* of *Linnaeus*, and of the *Arbores florea fructa remoto Bacciferae* of *Ray*. It is described by all the botanical Writers under the Name of *Juniperus arborescens* or *Juniperus Arbor*, some of it is also obtained from the *Cedrus Baccifera* of Authors. It flows from these Trees only in the hot Countries, and there naturally in some Plenty, but the Natives usually promote the Discharge of it, by making Incisions in the Bark: What is obtained from the *Cedrus Baccifera* is more fragrant, especially when burnt, and is therefore the more esteem'd by some, but it is seldom to be met with separate in the Shops, both being mix'd together under the common Name of Sandarach. These Trees are both Evergreens, but they are very different in many other Respects. The *Juniperus Arbor*, from which the far greater Part of the Sandarach we use is produced, is only distinguishable from the common Juniper in Size. It sometimes grows in Form of a very thick and large Bush, rising to a considerable Height, but full of Branches down to the Ground; sometimes it rises in Form of a Tree, with a naked Trunk and tufted Head, its Trunk in this Case however never is very thick: It is cover'd with a thin Bark, and its Wood is firm, well scented,